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WITH THE ASSISTANCE OF

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LA TENSION PSYCHOLOGIQUE, SES DEGRÉS, SES OSCILLATIONS¹

PAR PIERRE JANET.

LES OSCILLATIONS DU NIVEAU MENTAL².

LES notions relatives à la hiérarchie des actions nous ont déjà permis de classer divers individus suivant qu'ils parviennent à tel ou tel niveau psychologique au-dessus duquel ils ne peuvent pas s'élever. En décrivant les actes réflexes, perceptifs et sociaux, les actes intellectuels élémentaires, les volontés et les croyances immédiates du niveau asséritif, les volontés et les croyances réfléchies, les actes ergétiques et rationnels, les conduites expérimentales et les conduites progressives, nous avons reconnu chemin faisant l'idiot, l'imbécile, le débile mental, l'égoïste passionné, le systématique, l'esprit scientifique, le génie. Mais peu d'hommes restent ainsi fixés à un certain niveau et la notion de la hiérarchie des conduites doit nous permettre aussi de comprendre les changements que présente l'activité quand elle monte ou descend à chaque instant sous une foule d'influences et les phénomènes psychologiques si nombreux qui sont en rapport avec ces changements. Pour vous indiquer l'intérêt de ces recherches je voudrais vous rappeler comment nous pouvons interpréter à ce point de vue les phénomènes si importants de l'agitation et de la dépression qui sont unis ensemble, les divers degrés de la dépression, le rôle des circonstances qui produisent ces dépressions.

I.

Tous les observateurs connaissent ces malades accablés par des sentiments de tristesse, d'ennui, de gêne, d'automatisme, de doute, d'irréel, d'indifférence: ils comparent leur conduite actuelle avec leur conduite passée dont ils ont gardé le souvenir, ils expriment perpétuellement le regret du passé, l'humiliation et la honte du présent et ils tirent de ces idées la matière d'un grand nombre d'obsessions et de délires. De tels malades expliquent eux-mêmes leur état en disant qu'ils sont diminués, qu'ils sont au-dessous d'eux-mêmes. En examinant leur conduite le médecin est embarrassé, il constate au premier abord que ces

¹ Three lectures delivered before the University of London.

² Third lecture delivered May 12, 1920.

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malades ont des sensations, des mouvements, des associations d'idées, des souvenirs en apparence corrects, il ne voit pas ce qui leur manque, il est disposé à croire qu'ils se trompent et à les traiter de malades imaginaires. Chez un certain nombre de ces malades on doit remarquer d'abord que les fonctions psychologiques sont diminuées: les actes n'ont ni la force, ni la vitesse, ni surtout la durée normale. Au début toutes les actions semblent pouvoir être exécutées correctement, mais après peu de temps ou après un petit nombre de répétitions ces mêmes actions deviennent difficiles, pénibles, elles sont accompagnées d'agitations et ne tardent pas à devenir impossibles. Il s'agit là d'une diminution de la force psychologique dont nous avons relevé la grande importance. Nous n'insisterons pas maintenant sur ces asthénies simples, elles se présentent rarement à l'état pur, le plus souvent les malades présentent en même temps des troubles d'une autre nature. Pour apprécier les asthénies il est nécessaire de connaître les autres troubles plus importants, les agitations et les dépressions proprement dites qui expliquent et qui justifient les sentiments présentés par les malades.

Dans un grand nombre de cas les actes au lieu d'être diminués paraissent au contraire exagérés: le malade remue beaucoup, il accomplit des actes de défense, de fuite, d'attaque, il parle énormément, il paraît évoquer beaucoup de souvenirs et combiner toutes sortes de récits dans des rêveries interminables. Mais examinez la valeur et le niveau de tous ces actes, ce sont de simples gestes, des tics, des commencements d'actes inachevés, des secousses des membres ou des secousses de la poitrine, des rires, des sanglots, des efforts respiratoires, en un mot des réactions simplement réflexes ou perceptives en rapport avec des stimulations immédiates sans inhibition, sans choix, sans adaptation, sans réflexion. Les pensées qui remplissent ces ruminations sont enfantines et bêtes comme les actes sont grossiers et maladroits, il y a un retour manifeste à l'enfance et à la barbarie et la conduite de l'individu agité est bien au-dessous de celle qu'il devrait normalement avoir. Il est facile de traduire ces faits dans le langage que nous avons adopté: l'agitation consiste tantôt dans une activation complète de tendances inférieures, tantôt dans une activation très incomplète de tendances un peu plus élevées mais encore fort au-dessous de celles que le sujet devrait utiliser.

C'est qu'en réalité l'agitation n'existe jamais seule et qu'elle est toujours accompagnée par un autre phénomène très important qu'elle dissimule quelquefois, je veux parler de la dépression caractérisée par la diminution ou la disparition des actions appartenant aux niveaux les plus élevés de la hiérarchie. On observe toujours que chez ces malades

certaines actions ont disparu, que certains actes exécutés autrefois rapidement et aisément ne peuvent plus être accomplis. Ces individus semblent avoir perdu leur délicatesse, leur altruisme, leur critique intelligente. L'arrêt des tendances éveillées par la stimulation, la transformation des tendances en idées, la délibération, la réflexion, l'essai semblent supprimés aussi bien que l'effort moral et l'appel aux réserves pour exécuter un acte pénible. Il y a visiblement un abaissement du niveau psychologique et il est juste de dire que ces individus sont au-dessous d'eux-mêmes.

Ces deux phénomènes, l'agitation et la dépression sont presque toujours associés: il est probable que cette union dépend de quelque loi très générale relative à la dépense des forces psychologiques. Il est probable que les phénomènes supérieurs exigent sous une forme de concentration, de tension particulière, beaucoup plus de force que les phénomènes d'un ordre inférieur, quoique ceux-ci puissent paraître extérieurement plus violents et plus bruyants. "Quand une force primitivement destinée à être dépensée pour la production d'un certain phénomène supérieur reste inutilisée parce que ce phénomène est devenu impossible il se produit des dérivations, c'est-à-dire que cette force se dépense en produisant en grande quantité d'autres phénomènes inutiles et surtout bien inférieurs¹."

Pour ne prendre qu'un exemple considérons un moment le trouble banal de la timidité. Le timide qui a entrepris de parler en public ne peut pas y parvenir, il ne peut pas soutenir une conversation, il ne peut même pas entrer correctement dans un salon. C'est, dit-on, qu'il est troublé par l'émotion: il a des palpitations, des spasmes respiratoires, des secousses musculaires, un afflux d'idées dans la conscience, ce sont ces phénomènes d'agitation qui le gênent et qui l'empêchent d'agir. Si ces phénomènes ne le troublaient pas, il serait fort capable de bien s'exprimer: il réussit fort bien à faire tout seul dans sa chambre en parlant à des chaises la conférence qu'il ne peut pas faire devant le public. Il y a là un malentendu: l'action accomplie quand on est seul est une tout autre action que l'action faite devant le public, la première peut n'être qu'un bavardage du niveau des actes intellectuels élémentaires, la seconde demande un acte du niveau ergétique ou rationnel. Celle-ci se complique encore par l'acte d'affirmer sa personne, de l'exposer aux jugements d'autrui: c'est une de ces conduites relatives à la valorisation de la personne qui jouent un rôle essentiel dans les conduites ergétiques. Il est facile de constater que le timide est en réalité incapable d'une action de cet ordre élevé et

¹ *Obsessions et psychasténie*, 1903, t. p. 559.

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que la dérivation se produit toutes les fois qu'il est amené à essayer d'en accomplir une semblable. Sans doute il y a des cas embarrassants que nous aurons l'occasion de signaler tout à l'heure quand nous parlerons de l'émotion où la dépense excessive de forces peut être jusqu'à un certain point primitive et amener à sa suite l'épuisement et la dépression mais en général l'agitation et la dépression se développent parallèlement.

L'abaissement de la tension psychologique est quelquefois si net que certains phénomènes caractéristiques apparaissent au moment où il se produit. Dans notre première réunion nous avons déjà fait allusion au phénomène de la décharge qui permet d'interpréter bien des troubles pathologiques. Quand nous faisons autrefois l'étude des crises nerveuses, des attaques hystériques ou des accès épileptiques nous avons trop considéré l'attaque en elle-même pendant son développement; il faudrait à mon avis étudier davantage l'état physiologique et psychologique du sujet avant la crise et après la crise, on noterait des changements fort importants qui nous apprendraient beaucoup sur cette dynamique psychologique dont j'essaye de vous montrer l'importance. Déjà les anciens observateurs comme Briquet avaient observé que "malgré le brisement qui suit immédiatement l'attaque spasmodique les femmes hystériques se sentent plus légères, les membres plus dispos et l'esprit moins préoccupé qu'avant l'attaque." Avant l'attaque il y avait disproportion entre la quantité et la tension des forces psychologiques et la dépense des forces pendant l'attaque a rétabli cet équilibre dont j'ai essayé de vous montrer l'importance.

Très souvent l'attaque nous permet d'observer un autre fait également bien instructif, c'est le phénomène de la détente. On peut constater des faits de ce genre au cours des traitements des malades déprimés et il constitue malheureusement un des plus grands obstacles à leur guérison. Par différents procédés nous avons déterminé une excitation, c'est-à-dire que nous avons obtenu un fonctionnement plus actif et la restauration des activités dont le sujet paraissait incapable: les amnésies, les paralysies, les doutes, les obsessions et même quelquefois les délires semblent avoir disparu, la guérison des troubles mentaux semble complète. Mais après un temps variable, après quelques jours ou quelques heures survient une attaque plus ou moins violente et au réveil les mêmes symptômes sont réapparus car la dépression est de nouveau la même. Il n'y a pas eu simplement décharge des forces surabondantes, il y a eu changement de toute l'activité psychologique et diminution de la tension. Les accès épileptiques surtout nous permettent trop souvent de constater cette déchéance: l'état mental d'un épileptique avant et après la crise pourrait

souvent être représenté par une figure schématique où la courbe de la tension psychologique nous montrerait la profondeur de la chute pendant l'accès quand le malade retombe au niveau des actes simplement réflexes et quand son agitation convulsive n'est qu'une dérivation par arrêt complet des phénomènes supérieurs, puis elle nous montrerait le relèvement d'abord assez rapide ensuite plus lent des fonctions psychologiques et enfin l'arrêt plus ou moins prolongé à un niveau inférieur à celui où se plaçait le malade avant l'accès. De telles courbes d'ailleurs pourraient être employés dans bien d'autres cas pour caractériser bien des troubles névropathiques où l'on observe également des phénomènes analogues de détente¹.

Il n'est pas nécessaire qu'il y ait une crise convulsive pour que nous observions des détentes importantes, nous les constatons après des crises de pleurs, des migraines, des agitations variées. D'ailleurs la détente ne se manifeste pas toujours d'une manière aussi visible: elle peut se faire graduellement d'une manière insensible, mais toujours on constatera dans les troubles des névroses et des psychoses qu'il y a une dépression plus ou moins accompagnée d'agitation.

II.

La connaissance de la hiérarchie des fonctions psychologiques peut nous aider à mettre un peu d'ordre dans la description des innombrables troubles de l'esprit observés et décrits isolément comme au hasard par les moralistes et par les médecins. Il faut cesser de mettre une cloison imperméable entre les erreurs et les fautes, les bizarreries du caractère décrits par les moralistes et les romanciers et les maladies de l'esprit étudiées par les médecins. Les aliénistes ne doivent pas non plus se borner à décrire isolément les aboulies du psychasténique, les états mélancoliques, les états confusionnels, etc.: ils doivent établir les relations de ces divers états les uns avec les autres. Il me semble possible de démontrer que la plupart de ces troubles de la conduite ne sont que des degrés de la même dépression plus ou moins profonde. La profondeur de l'abaissement est caractérisée par le nombre plus ou moins grand des fonctions supérieures qui sont altérées ou supprimées et par le degré qu'occupent dans la hiérarchie les fonctions conservées et exagérées. Ce sont ces degrés de profondeur dans la dépression qui donnent aux différents troubles de l'esprit leur apparence si distincte.

Nous ne pouvons faire à ce propos que quelques remarques générales:

¹ *Les médications psychologiques*, 1920, III. p. 124; cf. *Ibid.* pp. 115, 122, 273-277.

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certaines dépressions n'atteignent que les degrés les plus élevés de la hiérarchie psychologique, les fonctions progressives ou les expérimentales ou même les tendances rationnelles. Ces dépressions légères sont le plus souvent compatibles au moins en apparence avec la santé normale et les hommes ne sont pas habitués à les considérer comme des maladies; les troubles qu'elles déterminent sont appelés des erreurs logiques ou des fautes morales. Un esprit faux, un individu qui ne tient pas compte des souvenirs dans sa conduite présente, qui "donne le coup de pouce à l'expérience," paraît simplement raisonner mal; le paresseux, celui qui manque de courage, qui ne tient pas ses engagements, c'est-à-dire qui descend au-dessous des tendances ergétiques et rationnelles, se conduit mal et fait une faute morale. Quand le trouble atteint les tendances réfléchies et détermine les aboulies, les doutes, les phobies, nous commençons à parler de névroses. Mais nous n'hésitons pas à employer les mots de psychose et d'aliénation quand il s'agit des délires pithiatiques ou des confusions mentales où apparaissent les agitations ou les insuffisances des opérations asséritives ou des intellectuelles élémentaires. Enfin nous découvrirons des maladies du système nerveux, de vraies lésions organiques quand nous constaterons des altérations des actes perceptifs ou des réflexes. Nous ne devons cependant pas oublier que toutes ces altérations sont au point de vue psychologique de la même nature et se rattachent les unes aux autres d'une manière continue.

En nous plaçant à un autre point de vue les mêmes notions nous permettront de déterminer l'importance de tel ou tel syndrome en le situant à sa place dans une série. Pour prendre un exemple, vous connaissez ces malades si intéressants rattachés autrefois par Krishaber à la névrose cérébro-cardiaque, ces malades qui se plaignent d'avoir perdu la réalité des objets ou la réalité d'eux-mêmes: "Je ne sais plus si le monde existe...je me demande si les objets qui m'entourent ne sont pas un rêve, une comédie....Il me semble que je suis morte et entourée de cadavres dans un tombeau noir....Ma personne réelle a disparu et vous ne parlez qu'à une ombre vaine de moi-même...." Ces malades ont justement attiré l'attention des philosophes et vous vous rappelez la page brillante de Taine qui voit dans l'étude de ces malades toute une restauration de la philosophie: "une observation de ce genre valant plus, disait-il, que tout un volume de métaphysique sur la substance du moi." J'ai recueilli longuement au moins 60 observations de ces malades qui sont plus nombreux qu'on ne le croit, j'ai noté avec curiosité toutes les variétés quelquefois bien bizarres du phénomène, et à bien des reprises j'ai proposé une interprétation de ce curieux symptôme. Il me semble

indispensable d'écarter les théories qui cherchent à expliquer ce trouble par des modifications des sensations élémentaires, qu'il s'agisse des sensations externes ou des sensations internes, d'écarter les théories qui rattachent le sentiment de l'irréel à des altérations des sensations viscérales ou des sensations musculaires, à quelque trouble de ce qu'on a appelé "la somato-psychose ou la myo-psychose." D'abord des troubles réels de ces sensations tels qu'on les observe dans des maladies organiques, dans le tabes en particulier, ne s'accompagnent de rien de semblable; en outre, comme je le répète depuis trente ans, les mesures les plus précises n'ont jamais permis de constater aucun trouble d'une sensibilité interne, externe, viscérale ou musculaire chez les douteurs de ce genre. Continuer à répéter que le doute de la personne dépend d'une perte de la "somatognose" c'est expliquer un symptôme réel par un mot vide et par un symptôme imaginaire, *obscurum per obscurius*. Il me semble plus intéressant et moins ambitieux de constater simplement la nature et la profondeur des troubles de la conduite qui accompagnent le sentiment de l'irréel et de situer ces troubles à leur place dans la série des dépressions. Or ce trouble n'apparaît jamais ni dans les dépressions légères ni dans les dépressions profondes: il n'existe jamais ni chez le neurasthénique léger ni chez le mélancolique. Il n'apparaît que chez le psychasténique au niveau des troubles de la réflexion; il se développe parallèlement aux troubles de la passion, de l'égoïsme, de la conduite intéressée. Ces individus qui doutent de la réalité de leur personne "ne s'aiment plus eux-mêmes" et se plaignent de n'avoir plus de passion pour rien, "je sais bien, répètent-ils en gémissant, que si je pouvais avoir une grande passion je guérirais tout de suite." Ils ne savent plus mettre dans une conduite l'intérêt de toute leur personne, en un mot ils ne savent plus adopter une volonté ni une croyance après réflexion. Ces observations m'ont amené à penser, comme je vous l'ai dit rapidement dans notre dernière leçon, que la conduite réfléchie amène la croyance à la réalité et au présent comme l'assentiment simple sans réflexion donne naissance à la simple notion d'être, d'existence. Sans doute ce n'est pas là une explication complète mais c'est une indication utile sur la direction des recherches, sur la nature des conduites qu'il faut étudier pour comprendre le phénomène.

Considérons un autre phénomène pathologique qui a également joué un grand rôle dans les études récentes, le phénomène de la suggestion. Il s'agit d'un assentiment, c'est-à-dire d'une volonté ou d'une croyance ordinairement complète et parvenue à son dernier degré d'activation, cet assentiment d'ordinaire s'accorde mal avec la réalité et nous paraît contenir une erreur. Mais cette exécution complète et ce caractère erroné

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ne suffisent pas pour caractériser la suggestion car toutes les volontés complètes, toutes les certitudes absolues même quand elles aboutissent à des erreurs ne sont évidemment pas des suggestions. Le caractère essentiel de la suggestion doit être tiré de la manière dont le sujet arrive à cet assentiment, du mécanisme psychologique de cet assentiment. Le fait essentiel c'est que l'assentiment de l'individu suggestionné est immédiat, sans réflexion : il appartient au niveau des tendances asséritives que l'on peut appeler aussi en raison de ce fait des tendances pithiatiques. Il y a là un assentiment analogue à celui des peuplades primitives ou à celui des individus atteints de débilité mentale ; il est déterminé uniquement par la force momentanée que prend dans l'esprit du sujet une phrase, une expression particulière. Cette force particulière vient des circonstances environnantes, quelquefois simplement du sentiment qui l'accompagne, de l'influence de la personne qui énonce la phrase avec autorité, qui la répète avec énergie ou avec douceur. La suggestion est l'assentiment immédiat à une formule verbale qui s'impose, elle rentre dans le groupe important des impulsions.

Mais pourquoi sommes-nous surpris de ce genre d'assentiment et lui trouvons-nous un caractère anormal tandis que nous ne remarquons pas le caractère analogue des assentiments chez les débiles ? C'est que les sujets sur lesquels on a observé des suggestions ne sont d'ordinaire ni des sauvages ni des véritables débiles : ce sont des individus capables de réflexion et qui dans la plupart des circonstances de la vie utilisent la réflexion plus ou moins habilement. D'ailleurs ces sujets ont à propos de la proposition suggérée un début de réflexion et on peut constater chez eux un essai de délibération ou de raisonnement. Mais comme on l'observe chez des individus incapables de conduire jusqu'au bout une discussion, leur délibération ne peut pas être prolongée et surtout ne peut pas aboutir à une décision réfléchie capable de donner à l'assentiment son dernier perfectionnement. Cependant la proposition se transforme tout de même en assentiment parce que le sujet semble renoncer à la réflexion et retombe dans une forme inférieure d'assentiment, l'assentiment immédiat sans réflexion. Nous sommes surpris de ce changement de conduite et le sujet s'en étonne lui-même : il ne retrouve pas dans l'acte ainsi accompli le sentiment de personnalité et de réalité qu'il était accoutumé à constater dans sa conduite : "Ce n'est pas moi qui ai agi, répète-t-il souvent, ce sont mes mains...j'ai été transformé en machine, j'ai agi comme dans un rêve..."

Le problème de la suggestion consiste à comprendre comment un individu ordinairement capable de réflexion cesse tout à coup de pouvoir

réfléchir et tombe dans un état inférieur où l'assentiment est déterminé d'une tout autre manière¹. Il y a là une dépression particulière qui dépend évidemment d'une certaine prédisposition mais qui est produite momentanément par des influences capables d'abaisser la tension psychologique et c'est la connaissance de ces influences qui donnera l'explication complète de la suggestion elle-même.

III.

Dans d'autres expressions psychologiques ou médicales on tient compte non seulement du degré de la dépression, mais encore de la cause de la dépression et il faut nous placer à ce point de vue pour comprendre les deux notions importantes de l'épuisement et de l'émotion.

L'épuisement ne doit pas être confondu avec la fatigue: la fatigue est un ensemble d'actions, une conduite qui réduit la dépense des forces et qui a pour but d'éviter l'épuisement; c'est une réaction plus ou moins élevée suivant le cas qui peut contenir des actes intelligents, réfléchis, rationnels même et qui rétablit l'intégrité de la force et de la tension psychologique. Cette conduite devient impossible dans l'épuisement réel: les individus épuisés ne sentent pas la fatigue, c'est-à-dire qu'ils ne commencent même pas au degré du désir les actes du repos, ils ne sont plus capables de la conduite élevée qui constitue la fatigue. L'épuisement en effet est quelque chose de tout différent, ce n'est pas une conduite normale, c'est un état anormal caractérisé par la diminution des forces disponibles et dans les cas graves par l'abaissement de la tension, c'est en réalité une véritable dépression plus ou moins profonde. Mais nous employons un mot nouveau pour la désigner parce que nous nous préoccupons de sa cause. Nous laissons de côté les dépressions constitutionnelles, celles qui sont produites par des intoxications ou des infections et quand nous parlons de l'épuisement proprement dit nous ne nous occupons que des dépressions qui semblent en rapport avec l'exécution même des actes.

Une notion importante dont une psychologie trop théorique ne tient pas assez de compte c'est que les actions dépensent des forces, c'est qu'elles sont coûteuses. "Le problème de la dépense psychologique, du coût de l'actions sera plus tard un problème capital de la psychologie et de la psychiatrie: aujourd'hui il est à peine soupçonné. Il nous suffit de rappeler ici à ce propos quelques notions pratiques: il est certain que certains actes sont plus coûteux que les autres et épuisent davantage les forces, c'est là l'origine d'une foule d'accidents nerveux. Mais il est

¹ *Les médications psychologiques*, 1920, I. pp. 203, 249-293.

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difficile de préciser et de dire quels sont ces actes et quels sont les caractères qui les distinguent d'autres actions moins dangereuses¹."

Il ne s'agit pas uniquement de la force des mouvements, mais surtout de la nature psychologique de l'acte. J'ai beaucoup insisté autrefois sur une catégorie d'actes qui déterminent souvent et facilement de l'épuisement: il s'agit des actions sociales qui sont presque toujours fort coûteuses. D'autres caractères semblent aussi rendre un acte coûteux, la complexité de l'acte, la rapidité avec laquelle il doit être accompli ont joué dans bien des cas un rôle important. Il faut bien se rendre compte que ces caractères modifient les actions. "Nous constatons cette transformation quand il s'agit de la rapidité: on ne peut pas accélérer la marche sans la transformer en course, on ne peut pas accélérer l'écriture sans adopter une écriture sténographique toute différente. Un voyage précipité qui réclame l'usage des automobiles et des trains exprès n'est pas identique à une promenade à pied, il réclame d'autres préparations, d'autres combinaisons, d'autres dépenses. Il ne suffit pas de savoir parler pour se servir correctement du télégraphe et du téléphone et la simple arithmétique ne suffit pas pour faire rapidement les calculs d'une usine ou d'une grande maison de commerce."

Un acte qui répond à une situation complexe n'est pas simplement un acte composé de mouvements plus nombreux, un acte qui réclame la mise en jeu d'un plus grand nombre de muscles, c'est un acte unique, quelquefois fort simple, mais d'un degré plus élevé dans la hiérarchie et demandant une tension psychologique plus grande. Une situation complexe au lieu d'éveiller une tendance unique comme pourrait faire une perception éveille presque toujours dans l'esprit la pensée de plusieurs conduites et donne naissance à des conflits: on ne peut alors réagir que par une délibération, par un choix, par une décision. Le sentiment de la responsabilité n'est pas autre chose que la représentation vive des motifs quand ceux-ci impliquent des conséquences graves de l'action. Ces opérations de la délibération et de la décision transposent immédiatement la conduite: au lieu des conduites appétitives qui correspondent au stade du désir et de l'assentiment simple elles exigent la conduite réfléchie qui correspond au stade de la réflexion et du contrôle des désirs. Le degré de la tension psychologique est devenu immédiatement beaucoup plus élevé. Aussi n'est-il pas étonnant que bien des individus soient incapables d'exécuter de tels actes correctement et que des conflits de conscience créés par les circonstances complexes soient l'occasion de bien des épuisements.

¹ *Les médications psychologiques*, II. p. 81.

On pourrait faire des remarques analogues sur les exécutions difficiles des actions, sur leur nouveauté, leur durée, leur prolongation après un échec. La transformation d'une conduite même réfléchie en une conduite caractérisée par l'effort et le travail est loin d'être insignifiante, elle est un passage à un état de tension bien plus élevé, c'est pourquoi demander une action de longue durée ou une attente c'est exiger un acte élevé et coûteux.

Nous en arrivons toujours à cette conclusion c'est qu'un acte est plus coûteux, plus propre à provoquer l'épuisement quand il est plus élevé. Il semble véritablement que l'acte d'un niveau supérieur demande pour être exécuté une dépense de forces considérable et cette remarque doit être ajoutée à nos observations précédentes sur la loi de dérivation pour nous montrer que l'action supérieure concentre les forces sous une forme particulière. Sans doute la pensée réfléchie épargnera bien des mouvements dangereux ou inutiles et déterminera au total une économie considérable des forces : la science n'a-t-elle pas pour rôle principal d'économiser les forces humaines ? Il s'agit là sans doute d'un bon placement, d'une excellente spéculation ; mais l'économie et les bénéfices n'existeront que dans l'avenir et pour le moment le placement demande une mise de fonds considérable. Les spéculations sont toujours dangereuses et les grandes dépenses même susceptibles plus tard d'un excellent rapport peuvent facilement amener la ruine. Il ne faut donc pas se tromper sur le caractère actuellement coûteux des actes élevés dans la hiérarchie. La principale cause de l'épuisement est l'action, surtout l'action élevée réclamée par les circonstances difficiles quand elle n'est pas en proportion avec les ressources du sujet.

Une autre cause intervient dans les dépressions, c'est l'émotion : le rôle qu'elle joue dans ces phénomènes permet de comprendre sa véritable nature et de nous rendre compte que l'émotion n'est pas autre chose qu'un épuisement d'une espèce particulière. Dans une étude que je présentais il y a dix ans à la Société neurologique de Paris¹ j'ai cherché à montrer que l'émotion était un trouble de l'action survenant au moment où le sujet était placé dans des circonstances particulières auxquelles il était mal adapté par ses tendances antérieures et auxquelles il ne parvenait pas à réagir correctement. Le trouble consistait en agitations de toute espèce et en impuissances, c'est-à-dire que l'on observait le fonctionnement exagéré de tendances inférieures et des insuffisances de certaines conduites supérieures qui auraient été nécessaires pour déterminer une

¹ "Rapport sur le problème psychologique de l'émotion," *Revue neurologique*, 30 Décembre, 1909; cf. *Les médications psychologiques*, 1920, II. p. 41.

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réaction complète. En un mot l'émotion consiste essentiellement en une dépression survenant plus ou moins rapidement à la suite d'une circonstance à laquelle l'individu n'a pas réussi à s'adapter.

Nous avons quelque peine à comprendre ce phénomène car d'ordinaire la dépression est déterminée par un épuisement à la suite d'une dépense excessive. Or il nous semble que dans ce cas le sujet n'a pas eu le temps de s'épuiser par l'action car l'émotion survenant dès la perception des circonstances difficiles a empêché l'action elle-même. Comment peut-on parler ici d'une action excessive puisque le sujet n'a pas agi et où peut-on voir avant l'émotion une dépense excessive de forces?

Distinguons d'abord ces épuisements tardifs qui sont si fréquents dans les émotions: le sujet ne semble pas extrêmement troublé après l'événement, il reste des jours et des mois un peu triste et inquiet mais assez normal en apparence et après cette période que Charcot appelait autrefois la période de rumination il tombe dans une dépression grave qui manifeste un épuisement considérable. C'est que pendant cette période d'incubation il a continué sans pouvoir s'arrêter des efforts d'adaptation à une situation mal liquidée et qu'il s'est épuisé dans un travail interminable et inutile¹.

Mais il y a aussi des épuisements rapides succédant presque immédiatement à la perception de la situation émotionnante. C'est que dans certains cas il y a dès ce moment de grandes dépenses de force. Précisément parce que la stimulation de la circonstance n'éveille pas une tendance bien organisée capable de réagir d'une manière adéquate qui liquide la situation, il y a éveil de nombreuses tendances élémentaires fortement chargées. Dans ces circonstances s'éveillent en effet l'instinct de la protection vitale, l'instinct de la fuite ou du combat, les tendances sexuelles, les tendances à défendre sa famille, sa fortune, ou simplement ces tendances puissantes chez l'homme en société à défendre sa propre réputation, sa valeur sociale en danger, tendances qui jouent un si grand rôle dans la crise d'intimidation. Il y a même des tendances moins précises, des tendances primitives au mouvement incoordonné qui ont simplement pour rôle de mobiliser une grande quantité de forces toutes les fois que la stimulation ne rencontre pas une tendance bien organisée et suffisante pour la réaction, c'est la tendance à chercher une issue à tout prix. Toutes ces tendances élémentaires ont un caractère commun: c'est d'être fortement chargées et de mobiliser de grandes forces.

Ces forces devraient être arrêtées dans leur mobilisation excessive,

¹ *Les médications psychologiques*, 1920, II. pp. 268-276.

utilisées, canalisées et même remises en réserve par l'éveil simultané de tendances supérieures. Un des caractères des tendances supérieures sur lequel nous revenons sans cesse c'est d'utiliser sous une forme particulière de grandes forces, de les transformer, de les mettre en réserve sous forme de croyances et de résolutions contenant de nouveau une forte charge latente. Elles peuvent donc arrêter, drainer les forces mobilisées et réduire leur dépense.

Il peut y avoir disproportion entre les forces mobilisées des tendances inférieures et celles des tendances supérieures éveillées en même temps. Cela peut arriver quand le danger réel ou imaginaire est vraiment considérable. Cela arrive aussi quand le sujet présente à la suite d'habitudes antérieurement acquises une disposition à grossir le danger, à se défier de lui-même, à considérer toujours ses propres réactions comme insuffisantes, à se préparer toujours à un effort énorme. Un commerçant avisé qu'il aurait le lendemain une traite à payer vend des valeurs et mobilise une somme de 20,000 francs, le lendemain la traite à payer était de 10 francs. Des dispositions de ce genre sont des facteurs importants de l'émotivité. Mais une seconde condition est encore plus importante, c'est une faiblesse des tendances supérieures déjà réduites par un abaissement préalable de la tension psychologique. C'est la dépression préexistante qui prépare l'émotivité et qui bien entendu est augmentée encore par l'émotion nouvelle de telle manière que les troubles nerveux et mentaux de la dépression se précipitent en boule de neige. Dans des cas de ce genre l'équilibre ne peut pas s'établir et il y a dès le début de l'émotion une dépense excessive de forces qui s'écoulent comme par une fuite.

Ces forces trop considérables viennent inonder les centres inférieurs et même les centres du système sympathique et déterminent ces dérivations, ces agitations viscérales qui ont joué un rôle considérable dans certaines "théories viscérales de l'émotion" mais qui doivent être considérées aujourd'hui comme secondaires. Ces agitations ne doivent pas faire oublier l'épuisement qui les accompagne et qui est augmenté par elles. Nous ne pouvons insister maintenant sur les mécanismes variés de cette dépense excessive dans l'émotion ni sur toutes les observations que l'on pourrait rappeler à ce propos. Nous ne devons retenir qu'une seule conclusion utile, c'est qu'au point de vue médical l'émotion se présente comme une forme particulière des dépressions par épuisement.

Pour comprendre la vie de l'esprit il faut reconnaître que la dépression

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et l'abaissement de la tension ne constituent pas les seuls changements que présente la conduite des hommes. Il faut faire aussi une place importante au phénomène inverse de l'excitation. Celle-ci consiste essentiellement en une élévation rapide de la tension psychologique au-dessus du niveau où elle était restée pendant un certain temps.

L'excitation ainsi entendue comporte des phénomènes essentiels inverses de ceux qui ont été observés dans la dépression, c'est-à-dire des phénomènes d'adaptation et de calme. Les tendances plus élevées qui précédemment ne pouvaient s'activer parviennent facilement à l'acte complet et même se précisent et se développent. C'est à ce moment que se fondent les souvenirs nouveaux et les habitudes nouvelles qui deviennent le point de départ de nouvelles tendances. En même temps les dérivations précédentes disparaissent et les actions même compliquées et rapides sont faites avec calme sans être accompagnées d'autres conduites exagérées et inutiles.

Nous avons insisté sur la psychologie de la dépression et nous ne pouvons étudier en détail les sentiments caractéristiques de plaisir, de joie, d'intérêt, de confiance, d'indépendance qui accompagnent l'excitation. Il nous suffit de rappeler que ce phénomène de l'excitation est aussi réel et important que le premier et qu'il détermine un grand nombre de symptômes que l'on observe au cours des névroses.

Les conditions qui semblent déterminer l'excitation sont moins connues et moins bien analysées que celles de la dépression. Nous savons que certains états physiologiques, que l'ingestion de certains poisons comme l'alcool, l'opium jouent un grand rôle, mais nous devons constater également que la grande cause de l'excitation se trouve dans les actions humaines comme la grande cause de la dépression. Les alimentations, les marches, les batailles, les actes sexuels, les dangers, les aventures de toute espèce ont été dans une foule de cas le point de départ d'excitations remarquables. C'est d'ailleurs ce qui est mis en évidence par certaines impulsions que l'on observe fréquemment chez les névropathes. Il est impossible de comprendre l'alcoolisme, la morphinomanie, la dromomanie, l'érotomanie si l'on continue à répéter que le malade délire complètement quand il réclame son poison ou son amour. Les actes des impulsifs ne deviennent absurdes que par la manière dont ils sont exécutés, mais ils ont un point de départ absolument juste, c'est que ces actions en déterminant de l'excitation peuvent dans certains cas modifier d'une manière favorable toutes les activités¹.

¹ *Les médications psychologiques*, III. p. 195.

Ainsi toute action peut avoir deux effets différents : elle est d'un côté coûteuse et épuisante et de l'autre elle enrichit et elle excite. Même au cours de la vie normale nous avons appris à utiliser volontairement ces changements de force et de tension déterminés par l'action. Quand nous nous reposons, quand nous nous détendons au milieu d'amis, quand nous nous endormons nous baissons la tension ; au contraire, quand nous commençons un acte, quand nous sommes en public, quand nous nous préparons à la lutte ou simplement quand nous nous réveillons nous nous tendons davantage. Bien des thérapeutiques dont les anciennes métallothérapies, les aësthésiogénies, les traitements par le travail ou par l'enthousiasme sont les types sont fondées sur l'utilisation de ces phénomènes.

Si nous nous rendons compte de l'importance de ces deux phénomènes opposés de la dépression et de l'excitation nous pouvons comprendre beaucoup mieux la vie de l'esprit, les oscillations de la conduite. La conduite des hommes semble bien compliquée et difficile à prévoir et cela paraît être en opposition avec la science psychologique des tendances. Si nous connaissons les tendances qui existent dans un individu et les circonstances qui agissent sur lui nous devons pouvoir prédire exactement ses réactions et cependant la conduite paraît imprévisible. Sans parler ici du rôle joué par les inventions et les progrès la grande difficulté de la prévision dépend de ce fait trop méconnu c'est que l'homme change sans cesse, c'est qu'à deux moments différents il ne présente pas le même mécanisme ni les mêmes tendances. Tantôt il n'a que des tendances inférieures qui fonctionnent suivant leurs lois, tantôt il est capable d'actions d'un niveau plus élevé qui ont d'autres lois. Ce changement peut se produire rapidement et à tout instant : il y a des oscillations rapides, de véritables crises de psycholepsie ; il y a aussi des changements lents dans lesquels l'esprit descend ou monte graduellement. Certaines de ces oscillations sont courtes et l'esprit ne reste qu'un moment en haut ou en bas, d'autres sont lentes et donnent l'illusion de la stabilité. Voilà quelque chose qui complique singulièrement les prédictions de notre courte science et qui nous explique la complexité de la vie.

Beaucoup de faits importants de la vie normale et de la vie pathologique restaient confinés dans les romans et dans les écrits littéraires ; la considération des degrés de la tension psychologique et des oscillations de l'esprit permettra peut-être de leur donner une place dans une psychologie plus vivante. C'est pourquoi j'ai essayé dans un tableau évidemment trop raccourci de vous donner le sentiment de ce que pourrait être une psychologie de ce genre à la fois objective et dynamique. Dans un pays

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où les études sur l'évolution se sont si brillamment développées, où l'on essaye aujourd'hui d'appliquer les idées profondes de Hughlings Jackson sur l'évolution et la dissolution du système nerveux à l'interprétation de bien des faits pathologiques, j'espère que ces réflexions générales seront accueillies avec indulgence et je vous remercie encore de l'occasion qui m'a été donnée de les exprimer devant vous.

ON THE BIOLOGICAL BASIS OF SEXUAL REPRESSION AND ITS SOCIOLOGICAL SIGNIFICANCE¹

BY J. C. FLÜGEL.

- I. *Introduction. The antagonism between Individuation and Genesis.*
- II. *The ultimate biological nature of the antagonism between Individuation and Genesis.*
- III. *The nature of the biological forces favouring Individuation and Genesis respectively.*
- IV. *The psychological correlates and consequences of the biological tendencies to Individuation and Genesis.*
- V. *The nature of the psychological difficulties involved in the realisation of the pressure of population upon the means of subsistence. Sociological consequences of these difficulties.*
- VI. *The probable sociological and psychological consequences of a more general realisation of the nature and significance of the antagonism between Individuation and Genesis.*
- VII. *Summary.*

I.

THE discovery of the widespread occurrence and the deep significance of sexual repression is, by universal admission, one of the most striking and important results of psycho-analytic research. The course and nature of the intra-psychical conflict, as a result of which this repression comes about, has been studied in detail as it actually occurs at different mental levels, with the result that much light has been thrown on the structure and function of the human mind and on the manner of its evolution. Not only has Psycho-Analysis helped us to a realisation and understanding of this conflict itself, but it has also enabled us to obtain a clearer view of the forces engaged in the struggle—or at least of those engaged on one side. In his epoch-making studies in sexual development² Freud has given us a cogent and penetrating analysis of the

¹ Being an elaboration of material contained in papers read before The Society for the Study of Orthopsychics, November 6th, 1919, the Sixth International Psycho-analytical Congress, September 8th, 1920 and the British Psychological Society (Medical Section), October 20th, 1920.

² Particularly of course the *Three Contributions to the Theory of Sex*.

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sources of the sexual instinct and of the manner in which this instinct comes to assume the shape in which it manifests itself in the adult human being; so that, although much remains for future research by way of corroboration, amplification and elaboration, a fairly sound foundation upon which to build up a detailed psychology of the human sexual impulses appears to have been laid.

Much less satisfactory however is our knowledge concerning the forces at work upon the other side. Although we are able to follow the changes and developments which the repressed sexual forces undergo in the process of repression, we are—in some ways paradoxically enough—still in comparative uncertainty as regards the exact nature of the forces which produce the repression and of the circumstances under which they act. In the earlier psycho-analytic work repression is frequently attributed to the influence of rather vague and indefinite factors connected with the ‘conscious ideas of the individual,’ the ‘moral forces of the personality,’ the ‘personality as a whole’ or with the desire of the individual to avoid the suffering of pain. In his later writings Freud has spoken more definitely of the ego-trends as constituting a source of instinctive energy of great power and importance which frequently acts in opposition to the sexual trends (which latter he includes under the term Libido), and in so acting is responsible for the majority of those intra-psychical conflicts, as a result of which sexual repression occurs. This psychic dichotomy (into Ego-trends and Libido) is frankly adopted by Freud in the first place for pragmatic reasons and, in so far as it is based on evidence of fact, it rests on a biological rather than a psychological foundation. At the same time psycho-analytic investigation, by its further progress, has to some extent revealed the cause of the relative backwardness of our knowledge concerning the intimate nature of the repressing forces (supposing these to be in fact connected with the Self)—this backwardness being largely dependent on the fact that the abnormal mental conditions in which aberrations of the ego-trends play the leading part have as yet been subject to comparatively little psycho-analytic study; so that the illumination that comes from the contemplation of faulty development and function as manifested in disease has not yet been thrown upon the Ego-trends to anything like the same extent as upon the Libido (disorders of which are chiefly responsible for the milder mental troubles which have hitherto most frequently been made the object of psycho-analytic investigation). An extension of our knowledge as regards the psychological nature of the forces responsible for sexual repression is therefore to be expected in the future

as the result of a more widespread and consistent application of the psycho-analytic method to the severer forms of neurosis and to psychosis. Meanwhile it would be very desirable to obtain a deeper insight into the nature of sexual repression from the biological point of view, both because this point of view must in any case constitute the ultimate foundation and logical starting point of our psychological knowledge and because it should afford a desirable preparation for dealing with the increase of psychological knowledge which we may hope soon to possess.

The biological factor to which the present paper is devoted is a very general one—differing in this respect rather markedly from most of those to which attention has been drawn by (the very few) previous investigators in this field¹.

This factor is not one to which attention is now being drawn for the first time; on the contrary it has, in different connections and from different aspects, received extensive treatment at the hands of more than one authority: it is however one which has (for reasons into which we shall later on attempt to enter), in the opinion of the present writer, received far less general consideration than it deserves. It is a factor the biological and sociological importance of which is as great as, or even greater than, its importance for psychology. Its application to biology and sociology has however already been made fairly clear by the work of previous investigators (though its significance in these fields is still inadequately recognised): so that our present task may be confined (apart from a brief statement of the already developed biological and sociological aspects) to a consideration of its psychological application—an application which has indeed as yet scarcely been attempted—and to pointing out certain conclusions, chiefly in the field of social psychology, which may be drawn from this application.

The factor in question consists in the existence of a necessary biological antagonism between the full development of the individual and the exercise

¹ The only serious attempt at a study of the biology of sex repression from the psycho-analytic point of view is that of Bleuler ("Der Sexualwiderstand," *Jahrbuch für Psychoanalytische und Psychopathologische Forschungen*, 1913, v. 442), to whose short but extremely valuable work in this direction the reader is here referred. The factor studied in the present paper is partly identical with Bleuler's eighth factor; though—as will become apparent—the present writer attributes a deeper and more far-reaching significance to this factor than does Bleuler. Apart from psycho-analytic writers, attention has chiefly been confined to the phenomenon of *modesty*—which is of course only one aspect of the general inhibition of sex, but which nevertheless constitutes one of the most important conscious manifestations of this inhibition. The best summary from this point of view is probably to be found in Havelock Ellis's monumental *Studies in the Psychology of Sex*, 3rd ed. 1920, i. 5 ff.

of his procreative powers—between Individuation and Genesis, to use the convenient terms employed by Herbert Spencer—an antagonism of such a kind that (other things equal) the energy devoted to the life activities of the individual varies inversely with the energy devoted to the production of new individuals. The relative amount of energy devoted to the two ends is determined (within the limits imposed by individual modifiability and racial variability) by the action of Natural Selection, there being some influences which favour the devotion of energy principally to purposes of Individuation, while other influences favour the devotion of energy principally to purposes of propagation; so that there is brought about (within the individual and within the race) a struggle between the two lines of development corresponding to the two conflicting influences of the environment, this struggle manifesting itself within the mind as a conflict between the sexual tendencies on the one hand and the self-preserving and self-regarding tendencies on the other; a conflict as the result of which there takes place the general sexual inhibition with which we are here concerned.

It will be observed that we are here dealing with a biological factor which has been clearly enunciated by Herbert Spencer in his *Principles of Biology*¹; a factor however which can perhaps scarcely be appreciated in its full significance except when considered in the light of the principles established by Malthus and by Darwin; since the true meaning of the antagonism between Individuation and Genesis only becomes manifest when we bear in mind the tremendous but unostentatious influence of the struggle for existence, as revealed by Malthus in its operation on the human race and by Darwin in its application to all forms of life.

It will be noted too that the antagonism here expressed in biological terms roughly coincides, in its application to Psychology, with the mental conflict between the Libido and the Ego-trends as understood by Freud. This being so, we may perhaps be justified in hoping that a more detailed consideration of the psychological aspects of the antagonism in question may throw some useful light upon the facts of sexual repression, as discovered by Psycho-Analysis.

II.

In his treatment of the relations between Individuation and Genesis, Spencer proceeds first of all to show *a priori* that there must exist an inverse relationship between these two methods of race preservation, and then goes on to demonstrate *a posteriori* that this necessary relationship does in fact exist. We cannot enter here into the mass of detail

¹ II. 391 ff.

involved in the *a posteriori* argument; a brief review of the main outlines of the *a priori* argument may however be attempted.

Two lines of *a priori* argument are employed. In the first the inverse relationship is shown to hold good of any given species, regarded as a class of beings endeavouring to maintain its existence against the hostile forces of the environment; in the second it is shown to hold good also of the individual from the point of view of his internal economy. As regards the first Spencer argues¹: "We have already seen that the forces preservative of race are two—ability in each member of the race to preserve itself, and ability to produce other members—power to maintain individual life and power to generate the species. These must vary inversely. When, from lowness of organization, the ability to contend with external dangers is small, there must be great fertility to compensate for the consequent mortality; otherwise the race must die out. When, on the contrary, high endowments give much capacity of self-preservation, a correspondingly low degree of fertility is requisite. Given the dangers to be met as a constant quantity; then, as the ability of any species to meet them must be a constant quantity too, and as this is made up of the two factors—power to maintain individual life and power to multiply—these cannot do other than vary inversely: one must decrease as the other increases."

He then proceeds to show that every species must conform to this law on pain of ceasing to exist; or else—if the departure from the law is only slight—that there comes into play an automatic process of regulation, whereby the inverse relation is soon re-established. "Suppose, first, a species, whose individuals having but small self-preservative powers are rapidly destroyed, to be at the same time without reproductive powers proportionately great. The defect of fertility, if extreme, will result in the death of one generation before another has grown up. If less extreme, it will entail a scarcity such that in the next generation sexual congress will be too infrequent to maintain even the small number that remains; and the race will dwindle with increasing rapidity. If still less extreme, the consequent degree of rareness, while not so great as to prevent an adequate degree of procreative unions, will be so great as to render special food very abundant and special enemies very few—will thus diminish the destructive forces so much that the self-preservative forces will become *relatively* great; so great, relatively, that when combined with the small ability to propagate the species, they will suffice to balance the small destructive forces.

¹ *Principles of Biology*, II. 401.

Suppose, next, a species whose individuals have great powers of self-preservation, while they have powers of multiplication much beyond what is needful. The excess of fertility, if extreme will cause sudden extinction of the species by starvation. If less extreme, it must produce a permanent increase in the number of the species; and this, followed by intenser competition for food and augmented number of enemies, will involve such an increase of the dangers to individual life, that the great self-preserving powers of the individuals will not be more than sufficient to cope with them. That is to say, if the fertility is relatively too great, then the ability to maintain individual life inevitably becomes smaller, *relatively* to the requirements; and the inverse proportion is thus established."

Two points of special interest for our present and subsequent considerations should be noted in connection with this argument. In the first place, we should observe that the maintenance of the inverse relationship between Individuation and Genesis is due to the action of the destructive forces of the environment: these destructive forces consisting principally of enemies, who may directly attack and kill the individual members of the species, and of the shortage of food (or other necessities), which may indirectly reduce the numbers of the species by allowing a certain proportion of the individual members to perish through want of adequate sustenance; this latter factor being (as Malthus has so convincingly shown) the one predominantly effective in reducing numbers in the human race.

Secondly, we may draw from Spencer's principle the corollary that a more rapid multiplication in any species must (other things remaining the same and within certain limits) bring in its train greater difficulties in the way of preservation of the individual life; while if the species takes to multiplying less rapidly, this will (with similar reservations) cause a corresponding reduction of the forces destructive of the individual, who will therefore enjoy a safer and a longer life. This corollary is of obvious importance in its application to the human race, where the rate of multiplication is to some extent directly under volitional guidance and where in consequence it would appear that in birth control we possess a potent weapon for rendering the individual human being longer-lived, more amply provided with the necessities of life and less exposed to the rigours of the struggle for existence; in other words for attaining those ends which the majority of social and political reformers have principally in view. That the corollary is true in fact has been shown by the evidence of vital statistics, which reveal a high positive

correlation between birth rates and death rates throughout the world, indicating that a high degree of exercise of the reproductive powers tends to be associated with a relatively high degree of danger to the individual life¹.

Spencer's second *a priori* argument, as already indicated, treats the matter from the point of view of the internal economy of the individual, and although of somewhat lesser interest from the biological and sociological points of view, is perhaps of even greater importance as regards the psychological aspects of the antagonism between Individuation and Genesis. The matter and energy which go to the formation of a new individual are withdrawn from the parent or parents and are therefore not available for enrichment of the parents' life, as they otherwise might be. This is very evident in the case of lowly organisms with whom reproduction takes the form of a simple budding off from the body of the parent; where it is clear that the more frequent the budding off and the larger the portions budded off, the greater is the amount of matter and energy subtracted from the parent organism. In higher organisms, with their various methods of sexual reproduction, the same relation holds, though considerably obscured by the complexities in which the antagonism between Individuation and Genesis now manifests itself.

¹ Our knowledge of the existence and significance of this correlation we owe largely to Dr C. V. Drysdale, whose important sociological work, published unfortunately in somewhat inaccessible form, is far less known than it deserves to be. Cf. *The Small Family System*, Fifield, 1913; *Wages and the Cost of Living*, 1913; *Diagrams of International Vital Statistics*, and the series of papers on "The Malthusian Doctrine and its Modern Aspects" in *The Malthusian*, 1916 and 1917 (the three last being published by the Malthusian League). By his statistical work Dr Drysdale has shown that in practically all countries rises and falls in the birth rate are accompanied by corresponding rises and falls in the death rate, so that a decrease in the number of births (such as has taken place in the last forty years or so in most civilised countries) has been accompanied by a more or less proportionate decrease in the death rate; that countries with stationary birth rates have more or less stationary death rates, and that the few countries which have shown a rise of birth rate have also shown a rise of death rate. These correspondences afford strong confirmation of the Malthusian position that each country can only support a certain limited (though under modern—pre-war—conditions, usually increasing) population, and that when by an unduly high birth rate the population endeavours, as it were, to increase beyond the limits imposed by biological and economic causes, the result is an increase in the death rate that cancels the effect of the high birth rate, so that the total population (or increase of population) remains approximately the same. The apparent exceptions to the correspondence between birth and death rates really prove the rule—for these exceptions (there are only two) are Australia and New Zealand, the two countries with the lowest recorded death rates and (almost certainly) the smallest amount of poverty, showing that in these cases there does not exist the pressure of population upon the means of subsistence which appears to prevail to a greater or less degree in all other countries for which adequate vital statistics are obtainable.

The production of offspring always involves some sacrifice on the part of the parent, hence there always tends to be a negative correlation between the degree of parental development and the number of offspring produced. The sacrifice required of the parent may however affect one or more of several aspects of his existence, so that the inverse relation between parental development and production of offspring may not hold strictly of any one of these aspects, but only of the total quantity of energy constituting the life of the parent. The chief of these aspects as regards which the inverse relationship in question may manifest itself are: size, complexity of structure, degree and complexity of the activities of mind and body (i.e. amount of energy expended in vital functions); while, in addition to the expenditure involved in the actual production of offspring, there is also to be taken into account the nutritive material directly supplied to them from the parent's body, together with the energy expended in providing them with food from other sources and in protecting them from danger¹.

Furthermore, the relationship is complicated by the fact that the absolute amounts of energy available for purposes both of Individuation and of Genesis depend upon the quantity and quality of nutriment obtainable by the parent, so that better fed individuals may, without any sacrifice of individual development, produce more offspring than the less well-fed individuals of the same species. As a further complication there should, strictly speaking, be considered, not only the number of offspring produced but also the size, quality etc. of this offspring: but as the size and quality of offspring are usually more or less proportional to the size and quality of the parents, this additional consideration can often be omitted in approximate comparisons—especially of course in comparisons between different species.

When all these complicating factors are taken into account, it appears that there must exist a very close inverse relationship between parental development and number of offspring, or in other words between the devotion of the available vital energy to purposes of individual life on the one hand or to purposes of propagation on the other. That this inverse relationship required by theory does exist in fact is shown by

¹ It should be noted however that these two last-named factors are in one respect less opposed to Individuation than are the others; since, although the actions involved in the provision of food for the young or the protection of the young from danger are of no personal benefit to the parent, yet the muscular or mental capacities involved in these actions may be used for other purposes in which the individual *does* personally benefit. Thus a powerful muscular development in the parent may be of use both for the protection of offspring and for individual ends.

Spencer in his minute and painstaking review of the reproductive habits of animals at all levels of development—a review to which the final chapters of his *Principles of Biology* are devoted: so that in conclusion he is able to formulate the law “that every higher degree of organic evolution [as exhibited in the development of the individual] has for its concomitant a lower degree of that peculiar organic dissolution which is seen in the production of new organisms¹.”

That this law of the antagonism between Individuation and Genesis applies to human beings as well as to all other animals is shown by Spencer in the course of his review, and indeed this is abundantly clear without any special demonstration, both as a result of our previous considerations as regards the racial aspects of the antagonism and from the commonplace observations of everyday life; which show that parenthood almost always involves some (often very considerable) sacrifice of individual interests.

Vital statistics again afford us scientific proof that common observation is in this respect correct, for they reveal the fact that there is a very general inverse correlation between birth rate and social culture. Not only are the birth rates of relatively uncivilised nations as a rule considerably higher than those of their more civilised neighbours, but within a given community the birth rate of the poorer and less cultured classes is almost invariably higher than the birth rate among those who possess greater wealth and culture. This inverse relationship, which eugenists deplore, is indeed only a particular manifestation of the general law of the antagonism between Individuation and Genesis².

But in endeavouring to abolish this relationship, our modern social reformers of the biological school are not necessarily doomed to failure (though their task is perhaps more difficult than they imagine); for it would seem that mankind has indeed the power to establish such conditions that the operation of the law in human society will be far less

¹ *Op. cit.* II. 472.

² An important qualification should be added here. In virtue of the fact that the reproductive organs constitute a very essential part of the organism as a whole, healthy function of these organs is necessary for the health of the organism and any attempt to abolish or unduly to curtail their function is not to the advantage but to the disadvantage of the organism. Thus it is probable that the majority of women are—in spite of the sacrifices that maternity entails—capable of becoming on the whole and in the long run more efficient human beings as wives and mothers than as spinsters (cf. the increased health and beauty of so many women after—or even during—pregnancy); the same applying of course *mutatis mutandis* to the reproductive life of men. In the psychic sphere, the importance of this principle is now well recognised by psycho-analysts, who attribute much neurosis and consequent mental inefficiency to unsuccessful attempts at excessive sublimation.

stringent than has hitherto been the case, and that by the exercise of this power certain biological and economic factors through which the law now manifests itself can be partially or wholly withdrawn from its sphere of influence. Some of the problems connected with this possibility will be discussed in the concluding section of this paper.

III.

Hitherto we have dealt only with the nature of the relationship between Individuation and Genesis and have shown that this relationship must be inverse. We have said nothing as to the manner in which the ratio between Individuation and Genesis (which varies so enormously in different species) is established in any given case. And yet this problem is obviously of very great importance to us here; for Psycho-Analysis is interested above all in the dynamic and functional aspects of the mind and is concerned not only with the distribution of mental energy as it exists at any given moment, but also with the changes in this distribution that occur in the course of mental life—in the individual and in the race: or to put the matter in terms of our present problem, we are interested not only in the existing aspects of the struggle between the sexual tendencies and the self-regarding tendencies but also in the modifications which this struggle has undergone and is likely still to undergo in the course of evolution.

To the modern student of biology there can be little doubt that Natural Selection is the ultimate force at work in deciding what proportions of matter and energy shall be devoted to Individuation and to Genesis respectively in any given species, and what modifications (if any) the ratio between Individuation and Genesis shall undergo in the history of that species. To quote Spencer once more, we may say that "whether the interests of the species are most subserved by a higher evolution of the individual joined with a diminished fertility, or by a lower evolution of the individual joined with an increased fertility, are questions ever being experimentally answered. If the more developed and less prolific variety has a greater number of survivors, it becomes established and predominant. If, contrariwise, the conditions of life being simple, the larger or more organized individuals gain nothing by their greater size or better organization; then the greater fertility of the less evolved ones will insure to their descendants an increasing predominance¹."

¹ *Op cit.* II. 473. As Spencer points out in this connection, every successful modification in the direction of increased individuation "entails a decrement of reproduction that

It is clear that in the history of animal life the conditions have very frequently been such that an increase of Individuation at the cost of Genesis has been of advantage in the struggle for existence; enabling those species or individuals who have undergone such increase to procure more or better food or to procure it with less effort, to avoid dangers more successfully, or else to protect their offspring more effectually. The main course of evolution appears indeed to lie in the direction of increased Individuation at the cost of diminished Genesis. But progress in this direction has only been achieved in the face of constant difficulties and in the course of a continual struggle between antagonistic forces within the organism itself and in its environment. Advance is therefore always slow and frequently uncertain. Such facts as the persistence at the present day after millions of years of evolution of living beings which never progress beyond the stage of unicellular existence and—at the other end of the scale of life—the disappearance from the earth of the magnificent saurians of the Jurassic epoch, serve to remind us very forcibly that conditions often remain favourable for primitive forms of life in which Individuation is at a minimum and Genesis at a maximum, and that changing circumstances may produce an environment that is unfavourable for the more ambitious attempts at Individuation characteristic of a previous age.

There is every reason to believe that as regards the human race evolution is proceeding on the same lines as those which it hitherto has followed, *i.e.* that there is a predominant tendency towards increased Individuation. In this respect however, as in so many others, evolution is here taking place at a faster rate than usually occurs in the lower grades of life. Progress has indeed been so rapid that it has to some extent obscured the antagonism between Individuation and Genesis when comparisons are made over a relatively long period of development; for modern civilised man not only on the whole enjoys a richer

is not accurately proportionate but somewhat less than proportionate. The gain in the one direction is not wholly cancelled by a loss in the other direction, but only partially cancelled: leaving a margin of profit to the species." For "if the extra outlay [in individuation] is but just made good by the extra advantage, the modified individual will not survive longer, or leave more descendants, than the unmodified individuals. Consequently it is only when the expense of greater individuation is outbalanced by a subsequent saving that it can tend to subserve the preservation of the individual; or by implication, the preservation of the race. The vital capital invested in the alteration must bring a more than equivalent return." This signifies that the ratio between Individuation and Genesis in the course of evolution (as distinct from the ratio as it exists at any given moment) is approximate only and not exact, the general law as regards evolution being that "Genesis decreases not quite so fast as Individuation increases."

individual existence than does primitive man but is not inferior to him in reproductive power; the truth being that civilisation has conferred such immense benefits upon man in the way of providing a more regular and more easily obtainable supply of the necessities of life as to render more energy available for purposes both of Individuation and of Genesis. Nevertheless, if we confine our considerations to a narrower period of time, it is easy to see that there exist those inverse correspondences between Individuation and Genesis to which we drew attention in the last section, and that Natural Selection (modified no doubt, in accordance with the more complex conditions of human life) is still at work in determining the ratio between the two factors.

In the long run Individuation has brilliantly justified itself. It is the increasing complexity of the individual life (and the increasing complexity of the inter-relations between one individual and another that in a human community goes hand in hand with this) and not the ability to produce large numbers of offspring that has been the principal factor in the progress of civilisation—and that civilisation is *on the whole* a success from the biological standpoint is shown by the great increase of population that it makes possible. As we have seen, this increase of Individuation can only have been achieved at the cost of a withdrawal of energy that might otherwise have been devoted to purposes of reproduction; so that, in the main, human evolution has involved a triumph of Individuation over Genesis, *i.e.* those individuals, communities and races which have concentrated on individual development rather than on multiplication have for the most part proved biologically superior to those who have relied more on their fertility than on their culture.

Though this is beyond doubt the main trend of human evolution, it is of great importance to realise that there has only been a *preponderance* of forces working in this direction and that there have not been wanting influences which have favoured Genesis rather than Individuation or which have at any rate favoured only a relatively small predominance of Individuation over Genesis. Since, in view of the treatment of the psychological aspects of the antagonism between Individuation and Genesis upon which we must shortly embark, it is of importance to have a sound appreciation of the underlying forces arrayed on either side, it may be of interest to conclude our biological considerations with an enumeration of some of the more important factors which are opposed to any rapid increase of Individuation over Genesis.

(1) At all except the highest levels of human development there is a tendency for the advantages obtained by a higher degree of Individua-

tion to be largely cancelled by a subsequent increase of Genesis. As we have seen, an increase in the amount of nourishment obtainable leads to an increase of energy available both for purposes of Individuation and of Genesis. If such increase of nourishment has been obtained as the result of an increase of Individuation, there will doubtless be present an hereditary tendency for energy to be devoted to Individuation rather than to Genesis, so that the newly available energy will also tend to some extent to flow in this direction. On the other hand Genesis is a biologically older and therefore more readily traversable channel for the draining off of energy than is Individuation, and when the struggle for existence is rendered less severe by the increased supply of nourishment¹, it is easy for the new energy to regress into this channel and to take the more viable path of Genesis rather than the more difficult one of Individuation. Should such a regression actually occur, a more rapid rate of reproduction ensues, and the advantages of the increased supply of nourishment may be partially or wholly annulled owing to the increased number of individuals to be fed. The struggle for existence thereupon becomes severer once again and the whole cycle may be repeated, so that there tends to be a rhythmic alternation in the ratios between Individuation and Genesis, in the course of which Individuation can only very slowly make a permanent advance.

As political economists have shown², this rhythmic alternation manifests itself quite clearly in the human race; every increase of prosperity (implying increased opportunity for individual enjoyment and development) leading to an increase in the number of marriages and births, so that the increased resources are spent in maintaining a larger number of individuals at much the same cultural level as before rather than in improving the conditions of the individual life. It is only at quite high levels of culture that this tendency is counteracted by a tendency of an opposite kind, *i.e.* one according to which the possession of certain individual advantages leads to the effective desire for still further advantages—advantages that can only be obtained by a still further increase of Individuation at the cost of Genesis; the tendency in question leading therefore to a reduction rather than an increase in the birth rate as a consequence of prosperity.

(2) The decreasing severity of the struggle for existence brought

¹ The same argument applies, of course, *mutatis mutandis*, if the advantage is not an increased supply of nourishment, but, say, a greater power of escaping from or overcoming enemies.

² *E.g.* J. S. Mill, *Principles of Political Economy*, Bk. IV, ch. III, § 4.

about by a successful advance in Individuation usually entails a less strict elimination of the unfit. The unfit are however in this case the less individuated and more prolific members of the species (since it is through an increase of Individuation that the fit have succeeded in diminishing the intensity of the struggle for existence). Hence, Individuation, by its very success, allows the more prolific stocks to increase at a more rapid rate than before and thus slows down its own progress. The advantages derived from increased Individuation in the race may thus in a short time be cancelled, so that the struggle for existence becomes severer once again and elimination therefore stricter. In this way there may be established a rhythmic alternation of greater and lesser Individuation of much the same kind as that referred to in the last paragraph—the alternation here being concerned with a more or less rigorous selection of the more individuated (and therefore—relatively or absolutely—less prolific) members of the *species*, whereas the former alternation was concerned with modifications in the ratio between Individuation and Genesis in the *individual*.

The present factor is one that operates extensively in modern civilised society, where—as eugenists are pointing out—the unfit not only profit by the generally increased supply of necessities made available by the labours of the fit, but are to a considerable extent directly supported at the cost of the fit, who have to forego some of the advantages of their fitness (sacrificing therefore some of the energy that would otherwise be available for their own further Individuation or increased Genesis) in order to support their weaker fellows.

(3) Apart from the tendency for a diminution in the intensity of the struggle for existence—as manifested in increased food or diminished danger—to cause a regression from Individuation to Genesis (1 above) and to reduce the relative advantages of Individuation (2 above), there is also a tendency for vital activities to be *generally* lowered, when circumstances no longer demand a high degree of these activities as an essential condition of the maintenance of life. All vital activities take place in response to certain stimuli, and the most efficient stimuli are those that have a direct bearing on the preservation of life. When the life of the individual is frequently in danger and when his most urgent needs can only be fulfilled with difficulty, he is (other things equal) likely to act more energetically and more effectively than when life is secure and all the urgent needs can be satisfied with relatively little effort. In extreme cases of the latter kind (which under natural conditions are of very rare occurrence) the organism tends to regress to

markedly simpler (predominantly vegetative) forms of vital activity—these being sufficient for its purposes in the easy circumstances of its life. The higher animals are prevented from attempting the extremer forms of this regression by the fact that their needs and desires are numerous and complex, and are consequently seldom all entirely gratified even in the most favourable circumstances. Even in Man however (especially in uncivilised man) relative inactivity may frequently result from easy conditions of life. Such individuals or races are then, sooner or later, superseded by others who have been trained in a harder school and with whom the struggle for existence has been more severe. But severity of this struggle is usually accompanied by—and indeed results from—a relatively high rate of reproduction, so that the latter individuals or races will be relatively prolific; in virtue of these influences therefore, there is frequently at work a tendency for the more prolific individuals or races to supersede those that are less prolific.

(4) In so far as energy is retained in spite of easier conditions of life, there is a tendency for it to be directed to aims and objects, which (though they may sometimes be of great eventual utility) provide little or no *immediate* biological advantage. This is of course especially the case as regards the human race. As soon as the struggle for existence is relaxed, men tend to pursue certain ends unconnected (or at best only indirectly connected) with life-preserving activities. Play, art and science (all in their widest sense) are perhaps the principal categories under which these ends fall, and although some of these manifestations of human energy have indirectly contributed very greatly to the preservation and increase of the race, they are inferior as regards their immediate biological value to such activities as the procuring of food and other necessities, the escaping from danger and the overcoming of enemies. Hence any individuals or communities indulging too freely in activities of the former kind are liable to be superseded by other individuals or communities with whom activities of the latter kind are more predominant. But in these latter individuals or communities the ratio of Individuation to Genesis is on the whole smaller than it is in the former individuals or communities, so that, as a result of this factor, there is again a constant tendency working in favour of Genesis rather than of Individuation.

It can easily be seen that influences of this kind are often of great importance in the human race. Within any given community the highly individuated classes with low birth rates devote large portions of their time and energy to ends, which are indeed intimately connected with

culture, but which have little direct bearing on the ability *to live*. Their interests are in fact very largely devoted to luxuries rather than to the necessities of life. They acquire a high standard of living in which such luxuries as books, pictures, music, elaborate clothing, daintily prepared food, elegant and convenient dwellings, come to be regarded almost as necessities. Unwilling to sink below this standard, they restrict the number of their offspring in such a way as to make sure that the standard will not be endangered. As a consequence, they are liable to be superseded by their less luxurious, less cultured but more prolific fellows who are content with a lower standard of living—each class in the scale of luxury and culture leaving in each generation fewer survivors than the class immediately below it. At the lower end of the class scale this tendency is largely counteracted by the higher death rate of the more prolific but less individuated classes; here Individuation has a real and immediate survival value. But as soon as Individuation is directed to luxury and culture rather than to the preservation of life, the tendency in question begins to work and constitutes one of the most potent influences in retarding the advance of Individuation.

Precisely the same considerations apply, *mutatis mutandis*, to nations and races. A prolific race which is content with the necessities of existence and does not aspire to luxuries is always liable to supersede a more cultured race that 'peoples down' to a higher standard of living. Up to a certain point the higher race may maintain its numbers owing to the fact that the higher birth rate of the lower race is compensated by the accompanying higher death rate. Even above this point the higher race may still maintain itself (or may even supersede the lower race), if its culture can be turned to ends that have survival value, *e.g.* by the superior control of natural forces resulting from the applications of science or by the advantages derived from a more complex and differentiated social structure. But that the danger to the more cultured races is a real one is shown by the repeated destruction of the complex civilisations of antiquity at the hands of peoples who were, relatively speaking, little more than barbarians.

IV.

Let us now turn to a consideration of the psychological consequences of the antagonism, the biological aspects of which we have been following. It would seem that on the psychological side there must be an antagonism which in the main is worked out on similar lines. Since the psychic activities of the individual correspond in a definite (though

complex and often obscure) manner to the physiological activities, it is natural to assume that the rival processes of Individuation and Genesis compete for possession of the available psychic energy in much the same way as in the case of the physical energy; that the amount of energy devoted to one of these rival processes is in inverse proportion to that devoted to the other; and that, corresponding to the increased success of Individuation over Genesis in the course of evolution, there has been a tendency for the proportion of psychic energy devoted to Individuation to be increased at the cost of the proportion devoted to Genesis.

Endeavouring now to put the concepts of Individuation and Genesis into psychological terms, there can be no doubt that Genesis has as its representative in the psychic sphere the sexual instinct, together with those impulses and instincts which centre round the care of children (if we distinguish these from sexuality proper; Psycho-Analysis has of course shown that the relation between sexuality and the parental tendencies is much closer than had formerly been supposed): while corresponding to Individuation are those tendencies through which on the one hand we adjust ourselves to our environment and on the other hand modify this environment in such a way as to make it conform as far as possible to our desires and needs—in fact those tendencies which are active in the case of *work* (using this term in its broadest sense). Now an antagonism of this kind between the sexual instinct on the one side and the work tendencies on the other corresponds exactly to the conflict that Psycho-Analysis has shown to underlie the repression and displacement of the sexual trends; for the normal outcome of this conflict is that the energy which was originally devoted to sexual purposes is sublimated, *i.e.* put into the service of the work tendencies; or, in our previous terminology, is diverted from purposes of Genesis to purposes of Individuation. There can be little doubt then that in the process of sublimation is to be found the principal psychological aspect of that antagonism between Individuation and Genesis, the general significance of which in the evolution of life we have already been at pains to show: and we are therefore justified in assuming that the underlying biological conditions are the same here as before, and that, in consequence, the tendencies that lead to sublimation have come about as the result of the same evolutionary forces that have elsewhere operated in favour of Individuation at the cost of Genesis, *i.e.* Natural Selection, working through the struggle for existence occasioned principally by the shortage of food.

Freud himself, it would appear, takes this view of the origin and

ultimate nature of sexual repression, for in his recent *Introductory Lectures on Psycho-Analysis* we read¹: "The motivating force of human society is fundamentally economic; since there is not sufficient nourishment to support its members without work on their part, the number of these members must be limited and their energies diverted from sexual activity to labour. Here again we have the eternal struggle for life that has persisted from prehistoric times to the present." In the facts of sexual repression and displacement—which in the light of Psycho-Analysis may be regarded as constituting one of the most fundamental principles of dynamic psychology—we thus recognise another aspect of the same great law which through the labours of Darwin and Wallace became one of the corner stones of biology and which had previously by Malthus been made the foundation of sociology and economics. An underlying unity of this kind between the basic principles of several sciences is at once encouraging as an indication of the general accuracy of the principles concerned and impressive as a proof of the far-reaching importance of these principles.

The severity of the conflict between the sexual tendencies and the work interests is thus to a large extent explained as a result of the conflicting environmental forces which favour Individuation and Genesis respectively. The fact that in this conflict it is the work tendencies which present every appearance of being the more recently acquired and developed (the sexual tendencies seeming in comparison more deeply and firmly rooted in our nature) is of course only what we should expect after our biological survey; which showed clearly that a high degree of Individuation (with the lower degree of Genesis that this entails) is a relatively late product of evolution, Genesis being in every way the simpler method of race preservation. At the same time the severity of the conflict and the extreme degree of the resulting sexual repression also indicate in their turn that the antagonism between Individuation and Genesis has been very violent in the human race and that the increasing influence of the environment in favour of Individuation has imposed on man the necessity for a relatively rapid diversion of psychic energy from sexual interests to work—rapid, that is, as compared with the general speed of evolutionary processes. Man, like all animals subject to an intensive process of Natural Selection, is suffering from a disharmony, in that he is not completely or equally adapted to his environment. Under the influence of Natural Selection he has developed certain tendencies which are at variance with certain other tendencies which

¹ Lecture 20.

were adapted to an earlier condition and which (being now vestigial) are to a large extent useless and even harmful. In the present case it is evident that Natural Selection has made it ever more advantageous for man to direct his energies to work rather than to sexuality: as a consequence he feels the ever-present need to work compelling him to do things that are difficult and often disagreeable, but which are nevertheless necessary if he wishes to preserve himself. But at the same time he has not been able to eradicate or overcome the older tendency to rely on Genesis rather than on Individuation and, like his fellow creatures on the same path of evolution, he is burdened with greater capacities of reproduction and greater tendencies to reproduction than he needs or than he can easily control. His reproductive powers, like those of all other living creatures, are enormous as compared with the actual possibility of increase—a possibility that is rigorously determined by the amount of nutriment available. Although he does not exercise these powers to the full extent, he nevertheless still uses them excessively, so that his numbers tend to be always in excess of those for which adequate sustenance can be provided (thus maintaining the struggle for existence, though of course in a modified and more complex form than in the case of the lower animals): and finally, even apart from actual reproduction, his thoughts and desires tend to be directed upon sexual matters to an extent that interferes very seriously with his capacity for work.

It is on this latter aspect of the antagonism between Individuation and Genesis that Psycho-Analysis has brought to light much invaluable material, some of which it behoves us to take into consideration here. More especially has it shown that the relationship between the sexual tendencies and the work tendencies is of a complex order—more involved than might perhaps have been expected on *a priori* grounds. In some respects possibly the relationship in question is the comparatively simple one that obtains between two (structurally and functionally) distinct sources of energy tending to pull the individual in different directions, the sexual forces on the one hand being opposed by the self-preservative trends upon the other. Recent psycho-analytic research has shown however that to a very large extent the relationship is more complicated, in that the sexual and work tendencies are both derived from the same source of energy (the Libido)¹. Now in so far as this is the case, the two

¹ It is interesting to note that as psycho-analytic insight has increased, it has become more and more difficult to indicate the nature and function of the Ego-impulses, the sexual sphere tending to be constantly enlarged at their expense (chiefly of course through the recognition of the Narcissistic components of the Libido. Cf. too in this connection, Freud's recent work "*Jenseits des Lustprinzips*," *Beihefte d. Int. Zeitschft. f. Psychoanalyse*, No. II).

alternatives do not correspond simply to different paths along which this energy can be drained off once for all at the start. Rather it would seem that the sublimated work tendencies are throughout built upon a (usually unconscious) sexual foundation. Without an adequate quantity of libidinous energy the sublimations cannot be formed, and in early childhood this libidinous energy always takes a sexual path; it is only after a certain period of life that the sublimations branch off from the more primitive sexual paths, the divergence being at first slight only, though later on it becomes more and more pronounced, so that the sexual origin of the higher adult sublimations is usually no longer easily recognisable.

But it is not only in the early stages of its development that the libidinous energy employed in sublimation assumes a directly sexual form. The results of psycho-analytic research appear to indicate that in the Unconscious a certain amount of sexual gratification is throughout life derived from the function of the sublimations, which in the deep levels of the mind are interpreted in a sexual manner in a way quite foreign to conscious thought. Sublimation being thus possible only through the existence of a strong Libido which manifests itself originally (and probably throughout life, in the Unconscious) in a sexual form, the increasing sublimations involved in the growth of Individuation necessitate at the same time a strengthening and deepening of their sexual foundations; so that each increment of energy devoted to Individuation would seem to involve (in the psychic sphere at any rate) some increment of energy also for its rival, Genesis—a fact that renders the higher stages in the growth of Individuation processes of peculiar difficulty and delicacy which are very liable to aberration.

The relationship between the sex tendencies and the work tendencies is thus complicated by the fact that a powerful sexual energy is required as a foundation for sublimation; but this is not the only complexity involved in the relationship. There are at least three other factors which make it necessary for the libidinous energy to be devoted, even in adult life, to sexual purposes as well as sublimation, and which, though closely inter-related, may yet perhaps, for the sake of clearness, be considered separately.

In view of this and of the admitted difficulty in distinguishing between the self-preservative and the sexual trends in the very early periods of life, there would seem to be a tendency to approximate in this respect (chiefly of course a formal one) to the view previously adopted by Jung, who regards the Libido as constituting the sum total of available conative energy—except that this tendency does not imply (as it does with Jung) any diminution in the significance attached to sexuality.

The first of these is the actual biological necessity for reproduction—which of course persists, however high may be the degree of Individuation, and which moreover, as we have already seen (Section III above), is liable to be prevented by a number of biological influences, which work in favour of Genesis rather than of Individuation, from attaining that low level which alone is compatible with the highest forms of Individuation.

The second factor is connected with the relatively slow physiological and psychological adaptability of the organism, as a result of which (quite apart from the above-mentioned influences favouring Genesis and even in the face of powerful forces favouring an increased degree of Individuation) only a certain quantity of libidinous energy is capable of sublimation; any attempt to increase this quantity beyond certain limits resulting not in sublimation, but in those unsatisfactory forms of displacement which constitute neurosis or else in unprofitable inhibitions, prohibitions or taboos. The limits in question vary greatly according to age, race and individuality, but in every mind there would appear to be a point beyond which the drafting off of sexual energy into non-sexual channels produces harm instead of benefit. Under the pressure of modern civilisation, with its stern demands for the repression of sexual gratification and the devotion of libidinous energy to sublimation, such attempts at excessive sublimation are very frequent and manifest themselves in the large number of individuals who suffer from the various forms of nervous disease.

The third factor is to be found in the existence of certain correlations between sexual and non-sexual function and development. Just as on the physiological side it appears probable that the performance of the sexual functions (and more particularly perhaps the production of the special secretions of the sexual organs) are of benefit to the organism as a whole, quite apart from sexual life, so too, on the psychological side, it is now fairly clear that normal sexual development and exercise are necessary conditions of healthy mental life in general. Absence of sexual interests, impotence, frigidity, perversion, homosexuality, undue fixation—all implying abnormality of sexual function and development—are all, it would appear, harmful to character or intellect even in matters at first sight totally unconnected with the sexual sphere¹. It would seem indeed as though the sublimations are, at all levels of development,

¹ Of particular importance in this connection is the correlation between (sexual) object-love and altruism on the one hand and between (the more primitive sexual stage of) Narcissism and selfishness on the other.

dependent on, and constantly reinforced or nourished by, the sexual functions, so that any failure in the proper function and growth of the sexual trends of necessity occasions some defect or disturbance in the powers of sublimation.

In virtue of these factors (and probably of others which closer study of the subject would reveal), the relations between sex and sublimation are extremely intricate. Sublimation is in a sense directly antagonistic to sexuality, but it draws its energy from the same source and is even to some considerable extent dependent on the welfare of its rival.

There are of course many other difficulties and complexities connected with this subject which we have passed over. There is however only room here for brief consideration of three further aspects of our problem.

As regards the first of these, a difficulty arises in connection with the fact that the researches of Freud have shown that the sexual instinct is itself a highly complex thing, comprising many different trends and impulses, the majority of which are not directly concerned with the process of reproduction. The antagonism between Individuation and Genesis which we are here considering appears at first sight to be capable of accounting only for the repression of those aspects of sexuality which directly lead to reproduction, since it might seem that these alone constitute a biological menace to the principle of Individuation. To this the reply appears to be as follows.

(a) Just as from the biological and physiological points of view it was necessary to include under the heading of Genesis not only the matter and energy directly connected with the process of reproduction but also that indirectly connected with it, such as the food provided by the parent for the use of offspring, the energy involved in the provision of which is not available for purposes of Individuation; so also from the standpoint of psychology we must bear in mind that all the numerous sexual interests and activities which are only indirectly associated with reproduction involve the withdrawal of psychic energy from sublimation and are therefore hostile to Individuation. Although the exercise of the non-reproductive aspects of the sexual instinct does not lead to the impoverishment of the individual life by increasing the severity of the struggle for existence as a result of over-reproduction, it does lead to such impoverishment by reduction of the quantity of psychic energy available for work. As Bleuler has indicated¹, human beings, owing to their ability to procure opportunities of enjoyment which are difficult

¹ *Op. cit.*

or impossible in the case of other animals, are constantly subjected to the temptation to pursue sexual activities for the sake of the immediate pleasure that they give. A particularly vigorous effort of repression is therefore called for in order to ensure the devotion of the necessary amount of energy to other purposes—purposes which, as Freud has pointed out, involve the renunciation of a nearer pleasure in order to obtain a more distant and permanent satisfaction that can be gained only by modification of the environment, *i.e.* by work. From this point of view the repression of the non-reproductive elements of the sexual tendencies is just as essential as a condition of increased Individuation as is the repression of the reproductive elements themselves.

(b) The reproductive and the non-reproductive elements of sexuality, although in their origin they appear to be to a large extent independent, are in the course of their development, as Freud has shown, firmly knit together. The sexual instinct of the normal adult consists of a more or less closely organised body of partial impulses under the hegemony of the directly reproductive trends; the non-reproductive aspects consisting for the most part of preliminary interests and activities which lead up to the reproductive act itself. This being the case, sexual repression in the interests of increased Individuation can no more afford to overlook the non-reproductive aspects of sexuality than can the sailor afford to neglect the distant cloud on the horizon which, harmless in itself, may yet be the forerunner of a storm. As a matter of fact, Psycho-Analysis has shown that it is indeed a general characteristic of repression to extend from the object at which it was originally aimed to other objects associatively connected therewith, so that many thoughts and tendencies, which in themselves would have escaped the censor, are subjected to repression merely because of their associations. This being the case, it is not surprising that the non-reproductive aspects of the sexual instinct (even were there no other grounds for their repression) should suffer repression on account of their close association with the process of reproduction itself.

Though the facts connected with the antagonism between Individuation and Genesis thus to a large extent necessarily prepare the same fate for both the reproductive and the non-reproductive elements of sexuality, it is worth nothing in this connection that the antagonism in question is—in human society at any rate—not without a certain differential action in this respect. The difficulties—ultimately, as we have seen, biological and economic—in the way of normal sexual gratification in adult life lead beyond all doubt to a far more frequent indul-

gence in perverse, homosexual and autoerotic activities than would otherwise be the case. Normal intercourse resulting in reproduction causes a prolonged or permanent impediment to Individuation; non-reproductive sexual gratification produces no such serious consequences and can therefore be indulged with relative impunity. It is true that the condemnation passed on abnormal or autoerotic sexuality is in some respects more severe than is that meted out to normal intercourse, which is of course permitted and even enjoined under certain conditions—conditions, be it noted, which imply that the responsibility for the consequences is to some extent being faced: this however is probably due (among a number of other causes into which we cannot enter here) to a dim realisation of the fact that abnormal and autoerotic practices are in some important respects easier and less dangerous, and therefore also more tempting and in greater need of inhibition. Fundamentally it remains true that in adult life the (social and psychic) impediments are in many ways greater in the case of reproductive sexuality and that in consequence there is a tendency for sexual energy to be deflected (or to regress) from normal, *i.e.* reproductive, aims to non-reproductive ends presenting fewer obstacles.

The second of the three final considerations mentioned above can be more briefly disposed of, though in truth its importance is such as to merit extensive treatment on its own account. The higher degrees of Individuation are—in human society—very largely connected with, or dependent on, the process of Socialisation. On the intellectual side, the individual can only attain the higher elements of culture through learning from his fellows, or through co-operation with them; as a result of which co-operation individuals are enabled to specialise in some particular branch of activity or culture and at the same time to derive the advantage of the work of others who have specialised in other branches. On the character side, this co-operation requires a high development of certain ‘moral’ or ‘social’ attributes, which in some respects, it is true, entail a sacrifice of individual aims, but which in other respects involve a greater individual development; such as is manifested for instance in the ability to subordinate immediate to ultimate ends and in increased powers of integration and control of impulse. To so great an extent is the increase of individual development in human beings bound up with the process of socialisation that the antagonism between Genesis and Individuation, as it applies to civilised societies, might, from certain points of view, almost as well be considered as a struggle between Genesis and Socialisation: for the

devotion of large quantities of energy to sexuality is antagonistic to the higher development of sociality in much the same way as it is antagonistic to the higher development of individuality (cf. the inverse correlation between birth rate and culture referred to above). The great importance of socialisation in the struggle for existence in the human race has brought it about that the qualities required for socialisation have played a very significant rôle in the later stages of human progress. Among these qualities the ability to 'get along' with our fellows and to accept their views and estimates is of particular importance and has probably undergone a special degree of development. It is in virtue of this fact that so many of the 'moral' impulses are connected with, or derived from, our relations with our fellow men, by way of fear, love, precept or example; so that it has appeared to some psychologists that repression in general, and repression of the sexual impulses in particular, is due to the operation of the 'herd instinct.' There is probably much truth in this view (though it is almost certainly an exaggeration to attribute all repression—sexual and otherwise—to this source) but from our present standpoint it is important to bear in mind that the influences inhibiting the sexual tendencies, which in human society may appear to emanate largely from the relations that connect us with our fellows, are only the representatives at this particular stage of development of forces that have been at work throughout the course of evolution, both in gregarious and in solitary animals.

The last factor which we can consider here is connected with the circumstance that, as a result of the repression to which it has been subject, a certain degree of inhibition has become, as it were, an integral part of the sexual instinct itself, which in human beings cannot attain full satisfaction unless it has to overcome some obstacle and, in the absence of any obstacle, tends to create one for itself. Modesty, coyness, shyness, secrecy, act not merely as hindrances to the manifestations of sexuality, but themselves constitute an essential aspect of these manifestations, a necessary link in the chain of processes that culminates in the reproductive act itself. When these resistances are lacking, sexuality tends to lose its charm; a too free, too rapid or too abrupt approach to sexual intimacy frequently resulting not in an increase but in a loss of sexual excitement. At times and places where the sexual inhibitions have been much reduced, sexuality (as Freud reminds us¹) often ceases to exercise its usual fascination. Thus the freedom in sexual

¹ "Beiträge zur Psychologie des Liebeslebens," II. *Jahrbuch für Psychoanalytische und Psychopathologische Forschungen*, 1912, IV. 49.

matters characterising the decline of ancient culture occasioned a lowering of the estimation set upon sexuality, and it was only as a result of the great wave of asceticism during the next few centuries that sexuality regained (and probably increased) its value.

This important rôle of inhibition within the sphere of sexuality itself may probably be traced to two principal causes, which are however not entirely independent of one another.

In the first place it is due to the fact that the powerful and almost permanent inhibitions that affect the sexual instinct cannot be easily or suddenly removed. The release of these inhibitions can apparently only take place by gradual degrees in such a way that the ultimate expressions of sexuality are led up to slowly by a series of preliminary processes approaching ever nearer to the ultimate goal. If an attempt be made to short-circuit this process and to plunge straightway *in medias res*, the repressions are apt to gather strength in face of the emergency and to render the attempt abortive.

In the second place, it seems probable that mankind has, in a manner, made a virtue of necessity and has utilised the sexual inhibitions as a means of obtaining a greater quantity of pleasure as a result of the accumulation of energy that these inhibitions bring about. It would seem to be a general law of mental process that (within certain limits and under certain conditions) the greater the tension released by any action, the greater the satisfaction derived therefrom. In accordance with this law, the delay imposed on the gratification of sexual desires by the operation of the sexual inhibitions increases the enjoyment ultimately obtainable from sexuality. A certain degree of tension, involving inhibition and control, is therefore essential if the highest possible pleasure is to be obtained, and may come to be recognised as desirable, or even to be voluntarily sought as a means of increasing pleasure. The 'art of love,' apart from its endeavour to bring into play the various partial impulses which are not too severely repressed, consists principally of an attempt to obtain the maximum of pleasure from a skilful use of delays, inhibitions and restraints¹. There is thus brought about at a higher level a veritable 'return of the repressed,' the inhibitions suffered by the sexual instinct having served but to add to its strength and to the satisfaction that it can afford. In this way it is

¹ One is naturally reminded here of the infant's method (to which Freud was the first to draw attention) of increasing pleasure by the retention of its stools. A parallel from adult (genital) life is to be found in the voluntary delay of, or even abstention from, orgasm practised by many persons.

possible to account to some extent for the fact that, although the sexual impulses of man are far more inhibited than those of other animals, man nevertheless appears to set far greater value on them and to derive greater pleasure from them than they do, and for the corresponding fact that, even within the human race, the more cultured individuals, in spite of their greater sexual inhibitions, may—provided they are not neurotic—derive a greater satisfaction from their (more complex and more controlled) sexual life than is obtainable through the freer (but simpler) sexuality of their less cultivated fellows¹.

V.

To the reader who has followed us thus far there may very possibly have occurred a consideration which is calculated to arouse both interest and astonishment. If the basis of sexual repression is to be found—principally or largely—in the antagonism between Individuation and Genesis, we should expect that the causes of this repression would before now have been to some extent well recognised. For, although some of the aspects of the antagonism which we have passed in review are such as would appeal only to the scientifically trained intelligence (*e.g.* the physiological, statistical and psycho-analytic aspects), there are other aspects which, we might think, would be apparent to any keen observer of human life. Thus the economic difficulties occasioned by a too rapid rate of reproduction should be recognisable by every one who has any considerable experience of poverty, and the further step to the conclusion that sexual inhibitions are not unconnected with these economic difficulties would seem to be, on intellectual grounds, both short and easy.

And yet we see that there has in fact been extraordinarily little recognition of this connection. It is true that an implicit recognition is involved to some extent in the behaviour of mankind; for, side by side

¹ This point of view perhaps constitutes the complementary (and more cheerful) aspect of the considerations brought forward by Freud, "Beiträge zur Psychologie des Liebeslebens," II. *Jahrbuch für Psychoanalytische und Psychopathologische Forschungen*, 1912, VI. 40 ff., as regards the suffering and renunciation of pleasure inevitably inflicted on mankind in virtue of the sexual inhibitions. It is true that the process of displacement, including sublimation, appears always to involve some renunciation of pleasure, the substitute-object being itself less satisfying (to our primitive tendencies at any rate) than the original object of desire. Nevertheless, the increased mental development involved in sublimation brings with it the possibility of greater pleasure; greater pleasure may therefore actually result when, on occasion, the barriers of repression are removed and the more primitive activities are once again set free.

with sexual repression in the sphere of mind, there have been developed in the sphere of action certain practices which aim obviously and directly at the same end as that which, according to our theory, constitutes at once the goal and the condition of the psychical repression of the sexual instinct. For while repression (together with its external and social equivalents, monogamy, late marriage, punishment and disapproval of extra-marital intercourse, etc.) leads to a slower rate of reproduction by reducing the amount of sexual intercourse, such practices as infanticide, abortion and prevention of conception achieve the same end by doing away with the consequences of sexual intercourse; and these latter, in varying proportions, together with unfruitfulness and chastity, have, as Malthus has shown, been at work in every portion of the human race as the 'preventive' check to population—which in turn is the only alternative to the more rigorous 'positive' check occasioned by the shortage of necessities. But though men have thus to some extent acted as though they understood the relationship in question, a real conscious understanding of this relationship has been very rare. Such recognition as has been manifested has moreover only too frequently been vague, hesitating and incomplete. Of course there can be no doubt that the application of the principle to individual cases has often enough been realised and that abortion and infanticide, like their less clumsy and more humane substitute contraception are, and have been, practised deliberately with a view to the avoidance of the difficulties which too numerous a progeny brings in its train. With the more educated classes of present-day society throughout the world the limitation of the family has indeed become a fundamental and almost universal rule of life. But in spite of this and in spite of the urgent practical importance of the questions involved, there has for the most part been a failure to draw the apparently easy corollary that in the difficulties and hardships imposed upon the individual by the excessive use of the reproductive powers are to be found the ultimate cause and justification of sexual restraint and inhibition.

This fact seems to indicate that human thought has here met with some peculiar inner difficulty, which has rendered progress in understanding the relationships in question more than usually hard, in spite of the relatively easy nature of the task from the purely intellectual point of view. Psycho-analysts will naturally seek the cause of this peculiar difficulty in some emotional inhibition, and our expectation that some such influence is really at work may well be strengthened by another fact of very great importance in our present connection, *i.e.*

the extreme reluctance to accept or even to consider the biological and economic principles associated with the name of Malthus—principles which may be said to coincide with an essential, perhaps the most essential, portion of the biological doctrine here advocated and applied. So great is the reluctance in question that the majority of educated persons are in almost complete ignorance of the nature and significance of these principles. But if we study the utterance of those who are to some extent conscious of the bearing of these principles on human life, we immediately become aware of the extreme distaste frequently felt towards Malthus's doctrine, the great difficulty that is often experienced in understanding it, the intense desire to show that it is false or that it does not apply to present-day conditions and the uncritical nature of most of the arguments advanced against it¹. This is perhaps at first sight the more astonishing in view of the general acceptance at the present day of the evolutionary principles of Darwin and Wallace, which themselves were admittedly founded on the principle of Malthus. But at the same time we must remember that Darwinism was itself, not very many years ago, subject to a high degree of irrational opposition; so that we may suspect that unconscious forces are active in making the acceptance of both doctrines one of difficulty—forces which moreover are probably to some extent the same in the two cases.

A study of the forces here at work is of very considerable interest in connection with our present purpose and is moreover of great importance on its own account: for there can be no doubt that the inhibitions for which these forces are responsible have caused, and are still causing, the human race to exhibit an almost pathological degree of blindness in matters which most intimately concern its welfare—matters too which

¹ For a recent consideration of the invalidity of the arguments against Malthus's position, together with a statement of the facts indicating the correctness of his views, see J. M. Robertson, *The Economics of Progress*, 1918, also the works of C. V. Drysdale referred to above. A classical exposition of the subject is to be found in J. S. Mill's *Principles of Economics*, though an even fuller treatment is to be found in George Drysdale's at one time well-known work *Elements of Social Science* (last edition, 1905).

How powerful is the resistance against the realisation of the truth and significance of Malthus's doctrine may be gathered from the fact that, although few attempts, if any, are made to refute the doctrine by modern economists, still fewer attempts at systematic or impartial treatment are to be met with; while at the same time the subject is sometimes not allowed a hearing even when it is most obviously in place, as happened at a meeting held by an eminent scientific body a few years ago, when, during a discussion on the cost of living, a paper by an exceptionally qualified writer treating the subject from this point of view was rejected by the organising committee, although no other communication dealing with this fundamental aspect of the question was presented.

have the closest bearing on nearly all the great political and social problems of our time. The subject therefore undoubtedly deserves elaborate and extended treatment at the hands of the psychologist; for the elucidation of mass-delusions along psycho-analytic lines will probably constitute one of the most important and useful tasks of social psychology in the future. Such treatment cannot of course be attempted here: nevertheless the subject is sufficiently germane to our present theme to justify a first essay in this direction in the shape of a rough enumeration and description of some of the more important motives that seem to be at work in rendering difficult the understanding of the biological and social factors with which we have been dealing.

(1) Among the motives of a more general kind is one to which Freud has already drawn attention as playing a part in the resistance to the doctrines of Darwin, i.e. the blow to human Narcissism involved in the recognition of the fact that human life is essentially of the same nature, and is subject to the same conditions as that of the lower animals¹. Just as it was unpleasant for man to abandon his claim to a special creation at the hands of the Divinity and to admit that he was of the same descent as his humbler brethren, so too it is unpleasant for him to realise that he is still subject to the same biological laws which control the destiny of the other animals; especially since these laws reveal the existence of an ever present danger to human life, which it would be much more agreeable to overlook. Man is (not unreasonably) a little proud of his unique position in the world of living beings and of the powers over the forces of Nature which he alone of these beings is able to wield. More particularly is he proud of his latter-day achievements in this direction, which have enabled him to modify his physical environment in a manner undreamt of by his ancestors and to gratify desires the fulfilment of which had up till comparatively recently seemed utterly impossible. It is humiliating to realise that in spite of this vast progress in the mechanical arts, man is still subject to the struggle for existence in essentially the same way as are the other animals, and that, increase production or modify distribution as he may, he cannot escape the fact that with him, as with them, the supply of the necessities of life is generally too small to provide a comfortable livelihood for the

¹ "A Difficulty of Psycho-Analysis," *International Journal of Psycho-Analysis*, 1920, I. 17. As Freud points out, this attitude of superiority is not one that is characteristic of the primitive human mind, infantile or savage; but it is evidently one that acquires great strength in the higher stages of culture. The study of this change in man's attitude toward the animals is an interesting chapter of psychology that has still to be written.

existing members of the race, much less for the immensely increased number that would result from a full exercise of reproductive power. In order to avoid the recognition of this painful fact there is a tendency to declare, first, that Malthus's principle of the pressure of population upon the means of subsistence is untrue; or failing this, that it does not apply to present-day conditions, with the greatly increased powers of production which we now possess (ignoring the fact that the population to be fed has increased concomitantly with the increasing supply of food); or, failing this again, that, although it may apply to the economic conditions as they exist at the moment, this need give us no serious concern, since the difficulties thus arising may easily be abolished in the near future—by such measures as increased emigration, cultivation of new land or intensive agriculture (neglecting again to take into consideration that, unless the ratio of population to subsistence be adequately controlled, any increased supply of necessities will be spent in maintaining a larger number of inhabitants at much the same economic level as before).

This then we may regard as the first of the great psychological difficulties in the way of an adequate realisation of the true cause of sexual inhibition—the blow to man's vanity involved in the recognition of the fact that, in spite of his exceptional capacity to bring about the satisfaction of his desires by the appropriate modification of his environment, he is nevertheless still subject to the law of Nature which ordains that the numbers of any given species shall be rigidly determined, not by the reproductive inclinations or capacities of that species, but by the supply of necessities that is available for the use of that species.

(2) A second factor of importance—one that is in certain significant respects related to the above—consists in the unwillingness of men to abandon a certain childlike attitude in virtue of which they are prone to believe that all their needs will in some manner be provided for without the necessity for forethought or effort on their own part. Such an attitude is fostered at a relatively conscious and superficial mental level by any social system in which the less thrifty and capable members of the community are (partially or wholly) maintained at the expense of the more able and far-seeing individuals. More fundamentally however the attitude is one that is adopted towards God or Nature rather than towards the community. It finds expression in such well-known phrases as "Bountiful Nature" and "Providence never sends mouths but it sends food" (statements which every serious student of biology and economics knows to be profoundly untrue in the sense that is intended) and may

be regarded as a particular aspect of a more general view, according to which the care of men is entrusted to the hands of a beneficent and ever watchful deity, whose constant vigilance relieves the human race of the necessity for foresight and makes it a virtue to "take no thought for the morrow," since to do otherwise would imply distrust of, or disbelief in, the deity in question.

In the light of Psycho-analysis it is easy to see that this attitude is principally derived (1) from the positive (or loving) elements of the parent-regarding complexes, the unlimited power and beneficence originally attributed to the parents being displaced on to the more abstract personalities of God or Nature; (2) from displaced Narcissistic tendencies which co-operate towards the same end, the omnipotence of the parent or of God being partly derived from a projection of the original (infantile) 'omnipotence of thought.' The concept of the monotheistic Christian God or of his more modern counterpart Nature is deeply imbued with this influence (the former representing—at least predominantly—a father substitute, the latter a mother substitute). Hence it comes about that the so frequently manifested blind confidence in the forthcoming of adequate sustenance for human populations, no matter how fast they multiply, represents a regression to an infantile level of thought and feeling, and is clung to with all the tenacity characteristic of early fixations; any attempt to overcome this confidence and to make an unbiassed scrutiny of the actual relationship between mouths and food being opposed with an energy that derives its force from a dim realisation of the fact that such a scrutiny would threaten with destruction the pious and pleasing delusions which have been built up round this subject; since it would show that the supposed guarantee of an ample supply of the necessities of human life at the hands of a beneficent deity does not in fact exist, and that, in consequence, man is, for the most part, dependent on his own efforts for such supply of these necessities as he may enjoy.

(3) While there are thus certain psychic mechanisms which make it difficult for us to realise that Nature herself (through her inability to provide sustenance for all who are or could be born) is responsible for the shortage of necessities that has led us in the course of evolution to restrain our reproductive powers, our past history and development have at the same time impelled us to look elsewhere for the cause of our troubles, thus adding an active factor of misconception to the passive factor of want of recognition considered under the last heading. The understanding and control of natural forces (such as are involved,

for instance, in agriculture or the construction of dwellings) belong to a comparatively recent chapter of human history. Before such understanding and control had been acquired, it was useless to turn to Nature for the alleviation of distress. On the other hand we have been accustomed all through our history (human and pre-human) to compete with other beings, belonging to our own or to some different species, for the available supply of food. The struggle for existence has indeed fostered this tendency, allowing those to survive who competed most successfully and eliminating those whose ability to assert themselves against competitors was insufficient. This being the case, we still tend in the face of any difficulty or disaster, to turn in anger against our fellow men rather than to seek for the explanation and correction of our troubles in terms of natural science. The arousal of individual, national or class hatred is thus a much easier matter than the arousal of interest in scientific remedies for sociological or economic troubles; and the hatred thus aroused may be responsible for lines of conduct directly opposed to the dictates of scientific economics. In this way for instance (to take an example from the sphere of class antagonism), capitalists and employers will oppose family limitation among the labouring classes on the ground that this may lead to a rise in wages, or Trade Unionists will limit production in order that their employers may have smaller profits or they themselves less fear of unemployment; immediate class benefits obscuring in both cases the greater advantages to be derived from harmonious co-operation in the limitation of numbers and the increase of supplies.

Not only is this tendency to seek a remedy for our troubles by aggressions on our fellow men biologically much more primitive and more deeply ingrained in human nature than the tendency to co-operate in the scientific examination and rectification of these troubles; the former tendency even undergoes a certain degree of secondary reinforcement under civilised conditions, where—owing to the complexity of social and economic factors (especially the use of money)—the difference in fortune between man and man becomes exceedingly conspicuous, while the fundamental facts connected with the production of food and other necessities are rendered difficult of observation. Under these circumstances it becomes only too easy to assume (with the imperialistically inclined) that all shortage of the necessities of life is due to the competition of other nations, peoples or races, or (with the socialistically inclined) to the injustice and tyranny of certain classes.

Here again, *parental complexes* are often at work reinforcing the

mistakes due to *instinctive tendencies* and to *faulty observation*; Nature being regarded, as before, as the beneficent mother who means well by her children, while the human enemies or oppressors are regarded with feelings derived by a process of displacement from those originally directed to the hated father.

In this manner there comes into existence (through the factors considered under this heading alone) a trebly supported opposition to the realisation of the true relationship between population and subsistence.

That these influences are still extremely powerful in our present-day society is revealed only too clearly by the fact that in the existing scarcity throughout great parts of the world, the method of dealing with the painful situation by means of wars, revolutions, strikes, fiscal barriers or legislation against 'profiteers' (*i.e.* by measures directed against our fellow men) is almost everywhere predominant over the more rational method of concerted effort to increase production (by measures directed to the control of natural forces). Hate—itself due very largely to the pressure of population upon the means of subsistence—having begot scarcity, this scarcity serves in its turn to perpetuate or to increase hate, and thus again to aggravate instead of to alleviate the scarcity. There is here a vicious circle from which (in the absence of any means of inducing a more reasonable attitude) there is probably no escape until—as has so often happened in the past—the destruction through strife, disease and starvation of large portions of the population shall have rendered possible a more ample supply of the necessities of existence for those who survive.

(4) While keeping thus in mind the very significant fact that the struggle for existence has implanted in us a tendency to look to our fellow creatures rather than to Nature as the cause of any scarcity of food or other necessities that we may experience, this must not blind us to the correlative fact that the human mind has, in the course of its evolution, also acquired a tendency to overcome the impulses which lead men to fight and compete with one another. The immense advantages of co-operation and socialisation (with the moralisation that these imply) are obtainable only with the help of a very considerable degree of inhibition of the more primitive egoistic trends, and although this inhibition is phylogenetically a comparatively recent growth and therefore corresponds to the more superficial levels of the mind, its importance for our present subject is but little inferior to that of the egoistic and hostile tendencies themselves. The gregarious and social tendencies with their resulting inhibitions exercise a more or less constant

repressive influence on hatred and pugnacity, and in so doing tend to repress also the memory or appreciation of situations calculated to arouse strife or hatred. It has thus come about that, along with the unwillingness to perceive private causes of hostility between definite individuals (*e.g.* between the different members of a family), men have also been loath to recognise the existence of certain general causes of hostility. Among these general causes the scarcity of the necessities of life with the inevitably resulting competition (between individuals, classes, nations or races) is by far the most fundamental, the most widespread and the most persistent. All those persons whose predominant mental trends are largely under the influence of a powerful inhibition of the hostile impulses—including a very large proportion of political, moral and religious reformers—have therefore been at pains to overlook the continuance of the struggle for existence among mankind; or, if they could not overlook it, to prove that it need not exist; and modern Western culture, which has so largely taken its ideals from reformers of this stamp, has for the most part followed in this respect the biased guidance of its leaders. That Nature herself, through the disproportion between the powers of reproduction on the one hand and the available supply of nutriment on the other, is responsible for making every man to some extent the enemy of every other, is for most idealists a truth too unpleasant to be tolerated. Hence in minds of this sort there arises a potent reason for the rejection of the doctrines of Darwin, and more especially of those of Malthus (where the struggle for existence is more definitely brought into relation with mankind). The more sincere types of Socialism and Internationalism aim alike at the abolition of hostility and competition between the members of the human race, and both have been in a large measure blind to the powerful obstacles which Nature has placed in the way of the realisation of their ideals¹.

In this respect our recent enemies the Germans would seem to have enjoyed a less distorted vision than ourselves. Although they may not have been altogether guiltless of sometimes placing undue emphasis on just those aspects of biology which seemed best to fit their pre-conceived political opinions, they were at any rate not blinded to the fact that the biological laws enunciated by Darwin indicated the inevitability of the struggle for existence so long as population continued to press upon the means of subsistence—a fact which many of our own thinkers,

¹ Of course I do not mean to imply that these ideals are necessarily unrealisable, but only that as a condition of their realisation the natural obstacles opposed to them must be faced and overcome, and not neglected.

misled by a more idealistic political philosophy, had overlooked. A sounder idealism of the future based on knowledge rather than on neglect of unpleasant realities may some day, we may hope, succeed in combining a genuine aspiration for the abolition of the cruelties involved in the struggle for existence with a due appreciation of the bearing of biological truths upon human social life¹.

Within the sphere of national, as distinct from international, politics, the same influences have clearly been at work. The supporters of the doctrines of Malthus have almost always been conservatives or individualists of the tougher sort, while to the more tender minded among social reformers (from Godwin onwards) "hard hearted Malthusianism" has ever been repellent. To the prevailing socialistic tendencies of political thought Malthusianism is unacceptable, not only for the reasons considered under the last heading, but also because it implies a recognition of the circumstances making for hostility between man and man which the socialistic idealist is anxious to avoid. And yet it is only by taking the necessary steps towards overcoming the struggle for existence (*i.e.* by adjusting population to available subsistence) that any successful socialism would be possible.

But the doctrines of Malthus are unacceptable, not only for the reason that they draw attention to causes of hostility which, in virtue of our philanthropic tendencies, we would fain overlook. These doctrines are also unacceptable in a more positive way, inasmuch as they threaten to remove some of the means by which these tendencies are at present gratified. As a result of the development of the gregarious tendencies, charitable or kindly behaviour towards our fellow men has come to be in some respects a source of considerable pleasure. Pleasure of this kind can be most easily and satisfactorily obtained by the direct alleviation of the sufferings of those who are less well endowed with the good things of life than we ourselves. Malthusianism, although it promises a much more thorough remedy for social and economic troubles than any of the usual charitable activities—since it deals with the cause of the troubles and not merely with their symptoms—is yet in some ways less calculated to arouse the interest and enthusiasm of the charitably disposed: (*a*) because these latter are already concentrated on their own schemes of social reform, which they are usually unwilling to abandon, (*b*) be-

¹ It is interesting to note that the Government of Japan, in sending recently a number of official delegates to the American Birth Control League with a view to the study of Neo-Malthusianism in the United States, explicitly stated their conviction that the subject of birth control was of the greatest importance in connection with the prevention of war.

cause the advocacy of Malthusianism does not involve the actual *giving* of anything—an element which is essential to the full gratification of our charitable tendencies, (c) because Malthusianism ultimately threatens to do away with poverty altogether, and thus to deprive us of the pleasure we derive from the exercise of charity (the heightening of our self-esteem, the sense of our own power, the satisfaction of the displaced anal-erotic tendencies involved in giving and of the displaced parental feelings involved in protecting, etc.).

The subject of parental feelings brings us finally to one other cause of resistance to the Malthusian doctrine which can most appropriately be considered under this head. The sacrifice that parents are called upon to make on behalf of their children and the competition and hostility that are to some degree inevitable in the relationship between parents and children¹ naturally lead to some degree of resentment and hatred on the part of the parents—feelings which find their primitive expression in the widespread practice of infanticide, child sacrifice, exposure and abortion; but which, in the course of moral development, have necessarily been subjected to a very high degree of repression. Now abstention from conception is, from certain points of view, only a further stage in the series of actions involved in infanticide or abortion, and constitutes to some extent an expression of hostility to the unconceived child in the same way that abortion and infanticide constitute expressions of hostility to the child before or after birth respectively. The repression of child-hatred which has led to the condemnation of these latter practices has to some degree extended to the Neo-Malthusian practices of contraception. Hence the tendency to look upon contraception as being (like infanticide or abortion) a kind of ‘murder,’ since all three practices gratify the same repressed (murderous) desires—a tendency that is probably to a large extent responsible for the very frequent identification of contraception with abortion and for a considerable portion of the moral indignation felt against the former practice².

(5) Connected also with the impulses making for gregariousness and socialisation is another factor of some importance, *i.e.* the tendency to feel faith and confidence in the existence or presence of large numbers of our fellow creatures. Human history has in the main favoured the creation of large communities, which (provided that economic conditions permitted of a relatively dense population), both because of the

¹ Cf. the present writer's *Psycho-analytic Study of the Family*, 1921.

² There are of course certain other important reasons for the identification in question. Cf. below, p. 268.

gains accruing from the division of labour and from the more active social and mental life characteristic of thickly populated districts and also because of their greater power in war, usually proved superior to their smaller neighbours, whom they eventually for the most part either exterminated or incorporated within themselves. The human race, having thus learnt in the course of evolution to appreciate the advantages of numbers, is apt to regard with distrust any social tendency that makes or seems to make for smaller populations. Now, as we have seen, recognition of the conflict between Individuation and Genesis implies also a recognition of the fact that superior individual development often requires a sacrifice of the absolute numbers of a community¹. This sacrifice is—in virtue of the tendencies just mentioned—contemplated with alarm, and the doctrine which seems to point to the desirability of this sacrifice is consequently neglected or repudiated.

That the faith in numbers still constitutes an influence of very genuine importance has been illustrated very forcibly in recent years by our confidence in the irresistible power of the 'Russian steam roller' at the beginning of the war and the corresponding fear of Russia on the part of Germany—both confidence and fear being, as it turned out, exaggerated in consequence of a failure to take due account of qualitative as well as quantitative factors. Another illustration is afforded by France, where, in spite of a very widespread application of Malthusian (or, more strictly, Neo-Malthusian) principles in private life, there exists something in the nature of a panic with regard to the low birth rate and stationary population—a panic that is resulting in a wild clamour for more births without any realisation of the conditions or consequences of a higher birth rate².

This tendency, in so far as it is due to the action of gregarious or social impulses, is apt to be powerfully reinforced by displaced self-regarding (Narcissistic) impulses, which, through an identification of the self with the community³ or state to which the individual belongs, sees in the increasing numbers of the latter an increase in the glory or safety of the Self—and is therefore unwilling to countenance anything that may reduce the population of the state, since in any such reduction it is apt to see a menace to the Ego. This factor is, in its turn, intimately connected with one that we shall consider below (6 B).

¹ Though (owing to the correlation between birth and death rates to which we have already drawn attention) this sacrifice is usually less great than is imagined.

² This panic has now resulted in legislation directed against the use of contraceptive methods—legislation which, if it is in any way effective, will almost certainly result either in an increase in the death rate or in an increase of the practice of abortion.

³ Cf. Ernest Jones, "War and Individual Psychology," *Sociological Review*, 1915.

(6) Perhaps the most important—and certainly the most direct—of all the influences opposed to the appreciation and understanding of the views of Malthus is derived from the sexual impulse itself. Sexual activity is (apart from inhibitions) easier and far more pleasant than activity along the lines of the various sublimations that underlie the process of Individuation; and, just as the cruder sexual tendencies are throughout opposed to efforts at displacement, so here too they are opposed to the recognition of a situation which urgently demands the abandonment or curtailment of sexual pleasure. It is unpleasant to realise that civilisation, with the process of individual and social development that this entails, requires an almost constant inhibition of some of the most powerful tendencies of human nature and a sacrifice of some of the greatest human pleasures¹; and the doctrine of Malthus as the most explicit formulation of this painful fact appears therefore quite especially distasteful.

The situation as portrayed by Malthus himself does indeed present itself in a particularly gloomy aspect, since according to his view it would appear that the abolition of over-population with its attendant evils of poverty, war, disease and premature death requires the very extreme degree of sexual inhibition involved in the postponement of all sexual relations till relatively late in life. Under the system of Neo-Malthusianism advocated by most modern followers of Malthus the outlook is by no means so depressing (though it is not without certain psychological difficulties of its own), since the sacrifice of sexual satisfaction involved is far less. The skilled use of Neo-Malthusian methods is however (chiefly on account of the sexual inhibitions attaching to them, cf. below, 6 B, 6 C, and 7) still comparatively little understood by the great majority of persons even in modern civilised countries; consequently the reduction of the sexual sacrifices required is imperfectly realised and Malthusianism is still very largely associated with the idea of painful and irksome restrictions upon sexual activity. Hence a great resistance to the doctrine which appears to render these restrictions necessary.

Allied to this resistance of sexual origin are a number of other factors which, since they manifest themselves in close connection with this sexual resistance (and are often superficially indistinguishable from it),

¹ It is probable that the unpleasure aroused in this connection is, in the case of many individuals, related to the existence of a powerful castration complex—the idea of castration being frequently associated with the earliest inhibitions of (infantile) sexual activity.

may perhaps best be classed as sub-groups under the present heading. The most important of these factors are as follows:

(6 A) At certain primitive levels of thought there appears to be a confusion between human fertility and the fertility of the plants and animals which serve for human food. This is shown in a very considerable number of primitive religious and social customs, underlying which are ideas such as the following: that barrenness in a woman or impotence in a man may cause infertility in crops or herds, that human incest may cause infertility both among men and among animals and that the fertility of plants or animals may be increased by the vigorous practice of sexual intercourse by human beings (a supposition which has encouraged the holding of sexual orgies at certain times of the year; such orgies—in actual or symbolic form—being a prominent feature of festivals of the Carnival type¹). It is not necessary here to enter into the psychological causes of this confusion²: it is sufficient to point out that this confusion must of necessity prevent a proper appreciation of the true relations between population and the means of subsistence, since it identifies the very factors which in any such appreciation must be rigorously kept apart.

It is only fair to add however that this factor is doubtless operative to a much greater extent among primitive communities than among modern civilised societies, although relics of its influence may still be found among the more pastoral and agricultural sections of the latter.

(6 B) For a variety of reasons, into which again it is not necessary to enter here³, the Narcissistic tendencies find a very special degree of satisfaction in the development and exercise of the reproductive functions and a corresponding dissatisfaction in anything that appears to entail a weakening or atrophy of these functions. Owing to the strength of

¹ *Vide e.g. Frazer, Spirits of the Corn and the Wild, II. 332 ff.*

² Which are doubtless complex in nature, but in which the following four factors will probably be found to be of importance: (a) the projection of human sexual desires on to Nature, in connection with the repression of these desires, (b) the Totemic identification of animals or plants with human parents, (c) the 'omnipotence of thought' manifested in the control of the food supply by homoeopathic magic, (d) a 'return of the repressed,' in so far as the practice of this magical control furnishes an excuse for the indulgence of sexual activities which would be otherwise prohibited.

³ They are doubtless connected in the ultimate resort with the biological conditions which make it advantageous for any race or individual to have reproductive powers and tendencies as vigorous as the economic conditions of life and the energy required for purposes of Individuation will permit (conditions which were considered in Section III of this paper); and also, more immediately, with the factors referred to under headings 1 and 5 of this Section.

the general sexual inhibitions in modern societies, our pride and joy in the use of the sexual organs can no longer find expression in the crude manner characteristic of the phallic cults of more primitive ages: but some remnants of our former attitude in this matter are still shown: positively, in the continued employment of phallic symbolism; negatively, in our somewhat morbid fear or disgust of anything that threatens the existence or activity of the sexual organs, *e.g.* castration or impotence. The tendencies underlying this attitude ally themselves with the motives which lead us to have confidence in a numerous population and distrust of any decrease of population or of any diminution in the rate of increase—motives which we have already studied (5 above).

That these tendencies are in reality derived from the psychic sources to which we have just referred is shown by the fact that those who extol most lavishly the benefits of a high birth rate and who exhibit most alarm at the voluntary control of births (which they are fond of designating 'race suicide') are to be found chiefly among old men and women (whose sexual power has departed or is declining), or else among confirmed bachelors, celibate priests or unmarried women. In the case of these persons there has probably occurred a *projection* of the primitive pride in fertility and sexual potency or of the fear resulting from sexual inhibitions or from impotence. The pride that would find a more primitive expression in the individual's own fertility or potency is displaced on to the fertility of the race or community, with resulting joy in a high national birth rate, fear of a decline in the birth rate and hatred of any doctrines or social movements calculated to bring about any such decline¹.

(6 C) There is also another way in which the Narcissistic tendencies co-operate with the reproductive trends to make the Malthusian doctrines appear unwelcome. Among the most common and important forms of displacement of the Narcissistic elements of the Libido is the transference of love from self to offspring—an individual's children being

¹ In actual practice this attitude is effective in preventing a proper appreciation of the Malthusian doctrines not only by direct opposition, but—especially in so far as it works with modern statistical weapons—by fostering an undue concentration of attention on birth rates to the neglect of death rates and other important factors which must be taken into account in any unbiassed consideration of the problems of population; the subject of birth rates being of course more in the direct line of displacement of interest in minds of the type here referred to. So great is the distortion thus introduced that the more violent type of 'répopulateur' seems often to be of the opinion that population depends simply upon the birth rate, as if such factors as death rate, immigration and emigration did not exist!

regarded as an extension or a re-incarnation of himself. The love of our children constitutes at once a socially more permissible and a biologically more advantageous form of Narcissistic gratification than the cruder forms of conceit or auto-erotic satisfaction; while the continuation of our own lives through those of our children and our children's children affords us at the same time the nearest possible approach to the immortality which, in virtue of our Narcissism, we so earnestly desire. It is therefore not surprising that the displaced tendencies which have found a satisfactory substitute in this way oppose everything which threatens to rob them of this substitute. Now it can scarcely be doubted that the practice of Malthusianism does bring with it a certain degree of danger to the continuance of the individual family. The process of 'peopling down' to a relatively high level of comfort entails—except under unusually favourable circumstances—such a limitation of the numbers of the children born to each marriage, as to expose the family to greater danger of extinction through accident or disease. This real increase of danger to the continued existence of any given family under a Malthusian régime is apt to be exaggerated in imagination: (a) through reinforcement by unconscious psychological factors, particularly those referred to under (6 B); (b) through failure to take into account that the increased danger in question is to some considerable extent counter-balanced by the fact that a decrease in the number of children per family usually brings with it a more favourable environment for each individual child, the increase of danger to the family as a whole being thus by no means directly proportional to the decrease in the number of children, as is sometimes erroneously assumed. The fear thus engendered and exaggerated is apt to exercise a very real influence in the rejection of Malthusian ideas¹.

(7) Just as the combative tendencies constitute a difficulty in the way of realising the true relations between population and subsistence,

¹ It is interesting to note however that the real danger on which the fear rests (and consequently to some extent the fear itself) may be expected to diminish somewhat as the practice of Malthusianism becomes more universal. At present those who do practise family limitation are forced to 'people down,' not only to the limit required for the preservation of their own standard of living, but to the still lower limit required for the provision of a surplus devoted to the partial maintenance of the large families of those sections of the community who produce more children than they themselves are able to provide for. In so far as the latter classes in turn adopt the practice of family limitation, the burden of providing for those who cannot support themselves or be supported by their own families will become less, with the result that (other things equal) a rather larger number of children per family will become possible in the case of the upper and middle classes, upon whom this burden principally falls.

both in virtue of their positive manifestations (3 above) and their negative or reactionary manifestations (4 above), so too in the case of the sex impulses difficulties ensue not only from the fact that the theory and practice of Malthusianism is directly opposed to the unimpeded function of these impulses but also from the fact that (paradoxically enough at first sight) Malthusianism is also in some important ways opposed to the repressive forces working against the sex impulses and to the reaction formations that have resulted therefrom. Malthusianism is repellent not only because it reveals the necessity for sexual inhibition, but also because it is too intimately concerned with sexual matters, appeals too strongly to sexual interests and desires and even appears in some respects to open up greater possibilities of sexual freedom and enjoyment; so that the far-reaching and elaborate sexual repressions which have been built up in the course of the struggle between Individuation and Genesis become in their turn operative in preventing the recognition of the relevant biological and sociological truths. The objections to Malthusianism springing from sexual inhibitions are indeed so powerful and persistent that they share with the political objections the rather doubtful honour of being (to a superficial view at any rate) the most striking of all the psychological factors which oppose their influence to unbiassed discussion and consideration of the problems involved.

This influence manifests itself in the first place as a general deterrent to all direction of thought upon matters connected with the sexual life: in this respect questions concerning population suffer no more and no less than any other problems dealing with sex. The sexual repression however also affects Malthusianism in more specific ways; first, owing to the fact that the consideration of birth limitation involves an inquiry into the intimacies of married life—a sort of reserved territory which has been left relatively free of prohibitions on condition that it is not too often or too openly discussed; secondly (and this is certainly the more important factor), because Malthusianism in its most popular and practicable form of Neo-Malthusianism—revealing as it does the possibility of indulging in directly sexual pleasures without incurring the penalty of parenthood, with the resultant sacrifice of Individuation—threatens to remove one of the most deep-rooted biological foundations of sexual repression, and therefore calls up a more than usually vigorous activity on the part of this repression. Hence the very widespread fear of ‘immorality’ as a consequence of the general knowledge of contra-

ceptive methods, the tendency to taboo these methods as degrading¹ and the desire (manifested especially by the Roman Catholic Church) that marriage—and sexual intercourse in general—shall not be freed from its 'natural' penalties. The widespread and powerful nature of the repressive forces here at work is illustrated not only by the published pronouncements of those numerous persons who are very seriously alarmed at the prospect of sexual pleasures being obtainable without the deterrent effect of the probable resulting conception, but also from the very remarkable (one might almost say pathological) blindness and ignorance of large sections of our population as regards the existence and obtainability of contraceptives, many city dwellers passing almost daily before shops where these articles are sold but never realising consciously the nature and purpose of the goods displayed or advertised.

This fear of sexual pleasure apart from reproduction is beyond doubt a very fundamental aspect of human sexual inhibition, being connected both generally with the repression of the various 'partial' sex impulses and their subordination to the purposes of reproduction and more specifically (as Bleuler² has emphasised) with the repression of onanism. It finds its biological justification in the fact that (as we have seen in the earlier parts of this paper) the conflict between Individuation and Genesis manifests itself not only on the economic level through the inverse relationship between numbers and individual development necessitated by a limited food supply, but also on the physiological and psychological levels by the competition of the two antagonistic processes for the available supply of vital energy. We are however not strictly concerned at this point with the individual and racial origins of this fear of sexual pleasure when divorced from reproduction, nor with the conditions in reality to which it may be said to correspond; consideration of which will fall more appropriately into our concluding Section. It is here sufficient to have pointed out the very important part which this fear plays in producing the inability to realise the nature of the biological and psychological factors to which the present paper is devoted.

¹ The method most frequently employed for this purpose at the present time is to identify, or to confuse them with the (illegal) methods of producing abortion—a result probably due largely to the co-operation of other motives, particularly those enumerated under the headings 4, 6 B and 6 C; the 'murder' of the embryo in abortion or of the spermatozoon in preventive intercourse being (unconsciously or semi-consciously) regarded either as a gratification of (repressed) death wishes (4) or else as symbolical castration (6 B and 6 C).

² *Op. cit.*

VI.

The lengthy considerations brought forward in the preceding Section have, we may hope, served not only the more immediate purpose of affording some explanation of the fact that our present views on the ultimate nature of sex repression, in spite of their simplicity, have not hitherto been generally or explicitly recognised: they have also, we should like to think, helped us to realise how great are the psychological difficulties in the way of a true understanding of some of the most fundamental problems of ethics, sociology and economics with which humanity is faced and how hard it is, in consequence, for humanity to find a satisfactory solution of these problems. In so far as our analysis of these difficulties has been correct we may perhaps even hope to have contributed in some very slight degree to the great task of freeing humanity from these difficulties and of making possible the adoption of a more unbiassed and reasonable attitude in matters which so intimately concern human welfare and human destiny. Having accomplished this much by the severe and not always attractive methods of biological and psychological analysis, we may perhaps be permitted in conclusion to take a few steps along the easier and more alluring path of speculation, in order to contemplate the possibilities of future development which our considerations may have opened up.

Our discussion of the difficulties in the way of a full and general recognition of the biological facts underlying sexual repression and of their practical and theoretical bearings is certainly not calculated to make us expect that this recognition will necessarily occur very soon, very suddenly or very rapidly. Indeed the difficulties in question seem to be so formidable that it would not be altogether surprising if such recognition were postponed for a very lengthy period. On the other hand the following significant facts: (*a*) that unwelcome scientific views, such as those of Copernicus, Darwin and Freud, have been or are being accepted by humanity; (*b*) that the present general trend of psychological evolution is probably towards conscious realisation and control of difficult problems rather than towards blind repression¹; (*c*) that the biological conditions of sexual repression are directly connected with other biological conditions that are already generally recognised; (*d*) that the recognition in question holds out the possibility of bringing a higher degree of satisfaction than would otherwise be possible to some of the

¹ Cf. the present writer's paper on "Freudian Mechanisms as Factors in Moral Development," *This Journal* (General Section), 1917, VIII. 475.

most powerful human impulses (through diminished work and increased sexual enjoyment) and therefore appeals strongly to the impulses in question—all these afford considerable justification for believing that the difficulties, however great, will be overcome and that some pretty general degree of recognition of the biological influences concerned will be achieved in the not too distant future. We must bear in mind moreover that the process of recognition will be immensely accelerated as soon as the economic and political implications of the biological facts become realised and adopted by any of the political leaders of the great nations.

Supposing then such a general recognition to take place, what prospects does this open up?

There are in the first place the biological and economic consequences, with which we are less immediately concerned here, but which are of immense importance, both directly in themselves, and also indirectly as regards their psychological effects. A full and clear recognition of the principles of Malthus and their application to modern problems would at once open up the possibility of abolishing the struggle for existence among civilised communities and of thus doing away with the root-cause of poverty and one of the principal causes of war. Whether these results would follow quickly, or at all, is of course in its turn a matter of uncertainty. It is quite conceivable that, even though the possibility of abolishing the struggle for existence were fully recognised, mankind as a whole would still elect to continue—at any rate for a time—in a state of over-population and competition for the necessities of life. The influences that had been at work in preventing the realisation of the principles of Malthus would not of course cease to act in general because they had been overcome in one particular; and it is probable that some of them would continue to operate so as to prevent the cessation of the struggle for existence.

To mention two points only in this connection: (1) It is obvious that the conscious and deliberate restriction of births in order that the number of those born should not exceed the number of those that can be fed—a procedure that would of course be necessary to bring about an end of over-population—is bound to arouse many difficult questions calculated to stir up national or racial hatred. Some nations or races would have to be content with a population little if at all exceeding that which they possess at present, while other nations or races would be capable of great expansion in this respect. There can be little doubt that this fact will give rise to fierce international or inter-racial dis-

putes that may not infrequently be settled by the arbitrament of war. Furthermore, it will very often be the more cultured nations or races which are least capable of further increase of population (since their territories will be already thickly populated), and this will augment their unwillingness to permit themselves to be outnumbered by their neighbours. This in turn will probably lead to an attempt to enforce a restricted birth rate upon the culturally inferior populations—a measure which may indeed in the first place be necessary for the preservation of the higher races, but which cannot be carried out without much friction and considerable exercise of force in one form or another.

Similar difficulties will to some extent arise within each nation; the poorer and less thoughtful classes will at first in all probability have to be compelled (by punitive measures or otherwise) to restrict their families within the limits imposed by economic conditions—a matter of no small difficulty and delicacy and one that is only too likely to arouse fierce class prejudices and hatreds.

(2) There is the more definitely psychological factor connected with the fear of the moral consequences of the abolition of the struggle for existence. We had occasion to refer to one important aspect of this fear at the end of our last section—the alarm caused at the prospect of sexual pleasure being freed from the restraints caused by the likelihood of resulting conception. This alarm will perhaps long continue to make the general use of contraceptives one of difficulty and will therefore tend to prolong the struggle for existence by preventing an adequate degree of birth control. There are however other more general aspects of this fear of moral consequences which will also exert an influence against the cessation of the struggle. There is, perhaps, above all a fear lest easier conditions of life should engender a slothfulness and lack of energy which would be fatal to human progress; a fear calculated to bring about a stern and puritanical attitude, which may long act as a counterbalancing force against the influences making for abolition of the struggle¹.

¹ The question of the justifiability of this fear is a fascinating subject, the full discussion of which would carry us too far away from the theme of the present essay. It has to some slight extent already been treated in the present writer's paper on "Ethics and the Struggle for Existence," *International Journal of Ethics*, 1915. We can therefore only suggest here that there are three points of principal importance to be borne in mind in this connection.

(1) In the last resort the whole or at any rate a great portion of all vital phenomena can be reduced to reactions to stimuli; stimuli being effective in producing reactions in proportion to the extent to which they are related—positively or negatively—to the

There are therefore good reasons to make us think that even though the possibility of abolishing the struggle for existence through the application of Malthusian principles were fully recognised by civilised peoples, the actual abolition of the struggle might be long delayed by further difficulties of a sociological or psychological nature. Nevertheless, as in the case of the conscious recognition of the Malthusian principles which we were just now discussing, it would seem that the appeal of these principles to fundamental human desires (including of course those more sublimated desires which we call 'ideals') is too strong to be permanently withstood, and that sooner or later a serious attempt will be made to put them into practice on a large scale, so that the struggle for existence as it affects civilised portions of the human race will definitely cease—for a time at any rate. A step of tremendous importance in human history will thereby have been taken; mankind having freed itself from

needs of the organism. When all the needs of the organism are fulfilled there is no longer any necessity for it to react. Now the abolition of the struggle for existence will certainly tend to reduce the number of stimuli (including the inner stimuli arising from unfulfilled organic needs) that are effective in this sense, and therefore will in the main also tend to produce a reduction of vitality.

(2) The question is complicated however by the fact that the needs of complex organisms (especially civilised man) go far beyond the mere provision of the necessities of existence, and would therefore not be automatically gratified by such provision. It would sometimes seem as if in man, in proportion as the more material needs are provided for, the more complex needs take the place of the simpler ones that are already satisfied; so that the individual tends to strive for ever more remote and difficult ends; the struggle for luxuries (in the widest sense of this term—including all objects of desire that are not essential to the preservation of life) thus gradually being substituted for the more primitive struggle for necessities. Whether the energy evolved in pursuit of these more complex desires is equivalent to that evolved in the pursuit of the more simple and essential ones, is at present still uncertain. Judging from the actual degree of activity manifested by primitive races or the lower classes of civilised races as compared with more advanced races and the higher classes of civilised races respectively, it might seem that there is a gain rather than a loss of energy through reduction in the intensity of the struggle for existence. Psycho-analytic study has however made it appear probable that the higher sublimations are only achieved as the result of repression of, or opposition to, the simpler forms of desire; so that, in so far as the abolition of the struggle for existence at the same time does away with the necessity for some of the (sexual) repressions concerned, there is perhaps some reason to fear a resulting loss of energy. As we shall see however, in a moment, some considerable degree of sexual repression will continue to be biologically necessary, so that the loss from this source may not be very great and may even be quite compensated by the increased energy available through reduction of neurosis.

(3) In any case it is certain that the energy expended by mankind after the abolition of the struggle for existence cannot permanently fall below a certain fairly definite amount; for if it did so, the supply of necessities produced would be less than that required for maintaining the smaller or more slowly increasing populations existing under a system of universal birth control, so that the struggle for existence would automatically recommence.

many of the biological influences which have determined its evolution (in common with the evolution of all other living beings) in the past and having acquired the means of shaping its own destiny according to its own desires to a far greater extent than had hitherto been possible. Such a step must necessarily bring in its train sociological, moral, economic and psychological consequences of the greatest possible significance—consequences as regards which however we cannot allow ourselves even the liberty of speculation here.

Let us rather turn in conclusion to a matter more definitely germane to our present subject—the question as to what effect the general recognition (in theory and practice) of the Malthusian principles and of the more inclusive Spencerian principle of the antagonism between Individuation and Genesis would have upon the sexual tendencies themselves and more especially upon the repression of these tendencies. It would seem that this process of recognition would in many important respects be analogous to the psycho-analytic cure of an Anxiety Hysteria in an individual patient. Just as the patient learns to understand that the real cause and justification of his anxiety does not lie in the object consciously feared but in some unconscious wish that is terrifying to his conscious personality, so the human race as a whole will come to understand that sexual thoughts, sexual desires and sexual actions are not in themselves immoral or disgusting, but are only undesirable in so far as they tend to prevent the proper development of the individual or the social life, either indirectly through the effects of over-population, or directly through the withdrawal of excessive amounts of energy from work and sublimation. Moreover, just as the individual patient after a successful treatment acquires a freer attitude towards the objects of his fear (which are also the objects of his desire) and is able to allow a greater degree of satisfaction to his Libido, without thereby endangering his sublimations, so too, in all probability, will the community be able to adopt a more frank and natural attitude towards the human sexual impulses, substituting rational insight and conscious control for methods of blind prohibition and taboo. This attitude will on the one hand facilitate sublimation (since under the taboo system many sublimations are throttled *in statu nascendi* by too great repression or too stringent external prohibitions in the early stages of displacement) and tend to free us from the more obsessive aspects of sex. On the other hand it will almost certainly lead also to a somewhat greater indulgence in sexual gratification than is at present customary with cultured individuals and races, since the study of nervous disease has clearly shown

that under existing conditions repression of the sexual desires is often carried to unprofitable excess, leading not to sublimation but only to neurosis.

With regard to the actual degree of sexual indulgence permitted, it is probable that a fairly clear distinction will have to be drawn as regards two aspects of the antagonism between Individuation and Genesis, *i.e.* on the one hand the threat to Individuation arising as a consequence of over-reproduction and on the other hand the similar threat arising as a consequence of under-sublimation. In the past both aspects of this antagonism have been largely concerned in sexual repression, the proper development of the individual being impeded at least as much by the shortage of necessities resulting from over-reproduction as by the competition of the more primitive sexual interests with the tendencies to work. In the future however, granted a more complete understanding of the biological tendencies underlying the sexual inhibitions and a more thorough and universal mastery of contraceptive technique, it would seem as though the influences emanating from the factor of over-reproduction would become far less operative than the influences connected with under-sublimation.

With regard to the former, it may be said that with the elimination of over-reproduction one of the most essential reasons for sexual inhibitions will have been removed. All those restrictions which had their ground—directly or indirectly—in the need for diminishing the rate of reproduction (*e.g.* postponement of marriage till relatively late in life, the harsh treatment of extra-marital unions, even to some extent the insistence on monogamy) will—*so far as this point of view is concerned*—become no longer necessary. Social disapproval will tend to fall less severely on those who freely indulge their sexual appetites than upon those who produce more children than they are capable of maintaining; since it will be recognised that (again, *so far as this aspect is concerned*) it is the latter and not the former class of persons whose behaviour constitutes the real danger to the prosperity of the community. There will thus be a very considerable transvaluation of values in the sphere of sexual morality—a transvaluation that should contribute immensely to mental health and freedom from neurosis.

The lifting of sex taboos should also produce a freer attitude not only towards normal heterosexuality but also towards the perversions—since it will be recognised that perversions do not threaten the community with over-reproduction and are therefore permissible, in *so far as they are otherwise harmless*: though, for reasons to be mentioned, it

is probable that the activity of the partial impulses insufficiently subordinated to the normal sexual goal will continue to suffer a greater degree of inhibition than normal adult sexuality itself. At the same time the (absolutely) greater freedom accorded to this latter should facilitate normal sexual development and render the perversions less common than at present.

A rather different prospect presents itself when we consider the effect on the sexual impulses of the need for sublimation. The abolition of the struggle for existence will doubtless render the necessity for work less urgent, less irksome and less insistent: nevertheless this necessity for work (and therefore also the necessity for the sublimations on which work depends) will undoubtedly persist, because (as we have already seen, p. 272, footnote): (a) in the absence of an adequate quantity of productive labour the struggle for existence would return, owing to an insufficient supply of necessities; (b) the gratification of the simpler human desires usually results in an intensification of the more complex, sublimated desires—leading to a demand for an increased supply of luxuries, in addition to the (now adequate) supply of necessities. The need for work arising from these causes will keep in existence that aspect of the antagonism between Individuation and Genesis which consists in the competition between sex impulses and sublimation for the available supply of psychic energy. In this competition the energy devoted to sublimation will probably continue (as at present) to be derived principally from those aspects of the partial sex impulses which are not incorporated into the normal adult sexual constitution. It is these non-reproductive aspects of sex which will therefore suffer the greatest amount of repression as a preliminary stage to sublimation. Nevertheless, the sexual instinct, even when deprived of these constituents will continue to be strong enough (especially when reinforced as a result of the cessation of over-reproduction) to become a serious rival to the processes of sublimation. There will therefore almost certainly continue to be a very considerable degree of inhibition of normal adult sexuality arising from this source. Men will be constantly under the necessity of resisting the more alluring sexual interests and activities, in order to bring sufficient mental energy to bear upon their work.

Just how far this inhibition will go it is difficult to foresee. All that can be said with certainty is that the energy devoted to work—and withdrawn from sex—cannot permanently fall below the amount necessary to avoid a recurrence of the struggle for existence. How far it will be

above this amount depends upon a variety of factors:—in some measure, no doubt, on the element of competition, those individuals, communities or races which are most successful in sublimation tending to dominate over those who are more pleasure-loving (this leading to a race for domination, in the course of which the competitive, combative and self-assertive tendencies will be played off against the sexual trends); in a greater measure upon the fact that individuals or communities belonging to the former (more sublimating) class will—other things equal—become more numerous than those belonging to the latter (more pleasure-loving) class, since by their greater powers of work they will (quite apart from war or competition) be able to support a larger or more rapidly increasing population; lastly in some measure also upon the extent to which man's mental organisation leads him to evolve fresh interests and desires in proportion as his simple and more primitive needs are fulfilled. If, as is sometimes supposed, there is in man's nature some forward urge, which compels him to ever higher and more complex activities, it is difficult to see any limit to the extent of sublimation, except that imposed by the necessity of maintaining the race. If, as seems to the present writer on the whole more likely, the tendency to sublimation is dependent upon the repression of more primitive trends, we may expect sublimation to diminish, or at least to increase less rapidly, in proportion as the easier circumstances brought about by a more complete adaptation to a civilised environment gradually diminish the necessity for effort, and therefore for repression; so that eventually a state of equilibrium will be attained in which the necessary degree of sublimation will be achieved at a minimum sacrifice of sexual pleasure.

Finally, considering the question from the ethical rather than from the biological standpoint, it would seem that the relative amount of energy devoted to sexuality and sublimation must in the last resort depend upon our views as to the nature of the goal of human life. If the Supreme Good is to be found in continual striving after ever more perfect, more complex and more harmonious forms of activity, in the constant increase of our power and knowledge, our duty will lie in the direction of the maximum of sublimation that is compatible with mental health and with the preservation of the race. If, on the other hand, pleasure is the highest end in life, the less sublimated activities would appear to be ethically preferable, provided sublimation be carried far enough to ensure "the greatest happiness of the greatest number"; in this case the pleasures connected with the exercise of the sexual functions will be assured of a high place in the scale of moral values. It is of course

possible that on further investigation these two views may not prove to be so incompatible as they at first appear; but, in the pursuit of our present purpose, the establishment of this antithesis is as far as we dare venture.

VII.

SUMMARY.

I. Attention is drawn to a factor of great generality in connection with the biological foundation of sexual repression.

This factor consists in the antagonism between Individuation and Genesis, as enunciated by Herbert Spencer and illustrated by the work of Malthus and Darwin; sexual repression being here regarded as the result of a conflict which constitutes the psychic aspect of this antagonism.

II. Spencer's two *a priori* arguments for the existence of the antagonism between Individuation and Genesis are briefly recapitulated and considered.

- (1) The (biological) conditions of racial existence necessitate an inverse correspondence between Individuation and Genesis (the more developed species being less prolific), since any other state of affairs entails either the extinction of the race or a return to the inverse correspondence.
- (2) The (physiological) conditions of individual existence necessitate this inverse correspondence, since the matter and energy devoted to reproductive ends are inevitably withdrawn from the (limited) quantity of matter and energy available for the use of the individual.

Both these arguments are shown to apply to the human race.

III. The relative amount of matter and energy devoted to Individuation or to Genesis is (within the limits imposed by individual modifiability and racial variability) determined by Natural Selection, which has on the whole favoured an increase of Individuation at the cost of a decrease of Genesis. There have however been certain factors which have retarded this process. Among these are to be found the tendency for the advantages obtained by a higher degree of Individuation to be cancelled by:—

- (1) a subsequent higher rate of reproduction due to easier conditions of life;
- (2) a less strict elimination of the unfit (who are in this case also the more prolific);

- (3) a general diminution of vital energy;
- (4) the direction of vital energy to ends which are of little or no immediate biological advantage (*e.g.* in the human race, play, art, science and, generally, the desire for luxuries).

For these reasons the more prolific races or individuals who are content with a relatively simple life may often supersede the more cultured but less prolific races or individuals.

IV. On the psychological side, the sexual (and parental) instincts correspond to Genesis and the sublimations of these correspond to Individuation. The latter represent (phylogenetically and ontogenetically) more recent acquirements, the former being more deeply ingrained in human character. There exists at present a 'disharmony' in this respect, the human reproductive tendencies and capacities being greater than is biologically advantageous.

The relations between sexuality and sublimation are, however, complex in nature, since the sexual tendencies constitute a necessary foundation for sublimation, both in the early stages of development and (probably to some extent) throughout life. A relatively high level of sexual function is also rendered necessary:—

- (1) by the actual need for reproduction,
- (2) by the relatively slow physiological and psychological adaptability of the organism, which limits the possibilities of sublimation,
- (3) by the correlation between sexual development and general development, healthy sexual function being necessary for the health of the organism as a whole.

Three further points are then considered:

- (1) The antagonism between Individuation and Genesis entails the repression of the non-reproductive partial (sex) impulses;
 - (a) because they interfere with work (sublimation);
 - (b) because they reinforce the directly reproductive trends.
 But the difficulties consequent on over-reproduction do entail in some respects an increased function of the non-reproductive partial impulses, leading to an increase of perversions etc.
- (2) In the human race the higher stages of Individuation are closely connected with the process of Socialisation, so that the forces of repression often seem to emanate from the 'herd instinct.'
- (3) A certain element of inhibition has become an integral part of the human sexual instinct itself;

- (a) because the powerful sexual inhibitions and restraints can only be overcome, slowly and gradually;
- (b) because the accumulation of tension resulting from these inhibitions serves to produce greater eventual gratification.

V. A due realisation of the nature and significance of the sexual inhibitions (together with their biological and economic foundations) has been prevented by a number of psychological factors, the study of which is of great importance for social psychology. Among these factors are:

- (1) An unwillingness (derived from the Narcissistic tendencies) to recognise that the human race is still subject to biological laws operative in the case of other living beings.
- (2) The idea (due ultimately to displacements of parent-love and of infantile 'omnipotence of thought') that God or Nature will provide amply for all possible human needs.
- (3) The tendency (fostered by Natural Selection in the past) to regard any shortage of the necessities of existence as due to the hostile actions of our fellow men. This tendency is reinforced by the economic complexities and inequalities of modern civilisation and also by a displacement of the hostile parent-regarding feelings.
- (4) The repression of hostile feelings, due to socialisation, leads to a failure to recognise the causes of hostility (between individuals, classes, nations or races) inherent in the pressure of population on the means of subsistence. Malthusianism is also unwelcome;
 - (a) because it reduces the outlets for our philanthropic tendencies;
 - (b) because it tends to serve as an expression of child-hatred on the part of parents—contraception being regarded as equivalent to abortion or infanticide.
- (5) The confidence in large numbers which has been fostered by our past history and which is sometimes reinforced by a (Narcissistic) identification of Self and Country.
- (6) Unwillingness to realise the necessity for the (unpleasant) inhibition of the sexual tendencies. Connected with this are:
 - (6A) The primitive identification of the fertility of human beings with the fertility of animals and plants that serve for food.

- (6B) The Narcissistic over-emphasis of the sexual function. This (when projected on to the community) leads to a desire for a high birth rate.
- (6C) The fear that Malthusianism may lead to the extinction of the individual family (this fear being largely due to a Narcissistic identification of the Self with the family).
- (7) An unwillingness to contemplate any divorce between Sexuality and Reproduction—this being chiefly due to the fear of removing the 'natural' obstacles to sexual pleasure.

VI. A full recognition of the view here advocated (together with the implied recognition of Malthusian principles) may therefore be very long delayed; but there are reasons why it should not be indefinitely postponed. But even if recognised, appropriate action may still be delayed owing to various difficulties, *e.g.* (a) the question of how the relative fertility of various classes and nations is to be controlled (especially in the case of culturally inferior nations and classes), (b) the fear of sexual pleasure and of general mental stagnation consequent upon easier conditions of life.

But if, in spite of these difficulties, the struggle for existence is abolished as a result of adequate birth control, we may expect that a freer attitude towards sexual problems and sexual desires will result. The two aspects of the antagonism between Individuation and Genesis will however affect sexual inhibition differently. The inhibitions due to over-reproduction will be entirely removed, but the need for sublimation will remain and will continue to necessitate a considerable degree of sexual inhibition; the actual intensity of the inhibition from this source depending on a number of factors—biological, psychological and ethical in nature.

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SOME PROPERTIES OF COMPLEX INDICATORS.

By W. WHATELY SMITH.

THE word-association test has already proved of great value in enabling us to work out the differences between various mental conditions, and there is no reason to suppose that the limit of its usefulness has yet been reached. I believe, on the contrary, that it is capable of considerable further development, and that the use of the psycho-galvanic reflex in conjunction with it is especially calculated to increase its power as a method of research and also, very probably, of diagnosis.

The material obtained from a word-association test consists, first, of the reaction words themselves whose form may throw light on the psychological type to which the subject belongs, and second, of observations on the 'complex-indicators' evoked by the various words. These two divisions overlap to some extent; on the one hand some forms of reaction word are themselves often complex-indicators—repetition of stimulus words, 'stereotypes,' etc.—while, on the other, certain properties of the complex-indicators may be relevant to the question of psychological type, *e.g.* the ratio of the arithmetic mean to the probable mean of the reaction time.

Each of these groups of data is amenable to mathematical treatment, and it is just this possibility of applying a purely objective and quantitative process of analysis to the content of the individual mind that makes the method so uniquely valuable.

The precision and reliability of the results which it yields must necessarily depend on the accuracy with which we interpret the indications which it affords; it follows that the more thoroughly we understand the properties of complex-indicators and the relations between them, the more satisfactorily shall we be able to analyse any mental condition to which we apply the method.

Many complex-indicators have been noted; the more important are: prolongation of reaction time, disturbance of reproduction in the 'reproduction test,' too-large psycho-galvanic reflex, reaction with two or more words when the subject usually reacts with one word, repetition of the stimulus-word, misunderstanding of the stimulus-word, faults, slips of speech, translation into a foreign language, reaction with an otherwise unusual foreign word, interpolation of 'Yes' or some other exclamation

before or after the reaction, unusual content of the reaction, perseveration in essence and in form¹.

I am here concerned only with the first three of these, viz.:

- (i) Reaction Time.
- (ii) The Galvanometer Deflection of the psycho-galvanic reflex.
- (iii) Disturbances in the reproduction test.

Note.—All reaction times were measured, and are given, in fifths of seconds.

Of these the first has received by far the greatest attention; the only work with which I am acquainted on the use of the psycho-galvanic reflex as a complex-indicator is that of Binswanger²; and some experiments on the "B. C. A." case by Prince and Petersen³. Even the reproduction test has not gained the recognition it deserves—I shall give below reasons for believing it to be one of the most reliable of complex-indicators.

In the course of the discussion I shall use freely the terms 'positive affective tone' and 'negative affective tone' which I introduced in the course of a paper on "Memory and Affective Tone" which appeared in the General Section of the *British Journal of Psychology* for January 1921. Positive affective tone is defined as that variety of tone which tends to attract attention or to promote the accession to consciousness of those 'ideas' or presentations whose presence therein it accompanies, while negative tone is the variety possessed of the opposite properties⁴. For the sake of brevity I shall speak of 'positively toned words,' meaning stimulus words such that the ideas evoked by them are accompanied by positive tone when present in consciousness, and of 'negatively toned words' in a similar sense.

I have shown in the paper cited above that the remembering of a list of words learned is markedly influenced by the affective tone of the words and, further, that the affective tone may tend either to promote or to impede memory and must therefore be of two opposite kinds which I have termed 'positive' and 'negative' respectively. I now propose to assume this as established and to use the 'memory value' of the stimulus word of a reaction as a guide to the affective quality of that reaction.

At this point I must guard against the possible criticism that I am

¹ Jung, *Studies in Word Association*, p. 405.

² *Loc. cit.* pp. 446-530.

³ *Journal of Abnormal Psychology*, 1908.

⁴ In general 'positive' will correspond to 'pleasant' tone, and 'negative' to unpleasant, but this correspondence is not necessarily invariable.

arguing in a circle, as who should premise *A* in order to deduce *B* and then premise *B* in order to deduce *A*. Such a criticism would be unjustified. My only assumption with regard to my work on memory was that the complex-indicators concerned did, in general, indicate affective tone—an assumption which, I imagine, no one would wish to dispute. I then showed experimentally that memory is influenced by affective tone and that two varieties of the latter must be postulated in order to account for the effects observed: these conclusions, again, are entirely in harmony with general psychological knowledge. I also found that somewhat different, albeit congruent, results were obtained according to the complex-indicator used to detect and measure the tone.

I now assume:

- (i) That complex-indicators show affective tone.
- (ii) That memory is influenced by the latter.
- (iii) That there are two opposite varieties of tone.

Of these (i) was the initial assumption while (ii) and (iii) are not only acceptable on general grounds but also necessary deductions from my experimental results.

I now propose to investigate the differences between complex-indicators, not to prove their common quality of indicating affective tone.

The first point to which I wish to draw attention is the fact that positive affective tone is as 'real' a thing as negative tone. So far as I am aware this is a matter which has been wholly overlooked by all who have worked with the association test. The reason is obvious enough; this branch of psychological research has always been closely connected with psychopathology, and those who have studied it have approached it from an essentially pathological standpoint. Now, in psychopathology the negatively toned¹, conflict-producing complex is all important; this, the true 'complex,' is the *fons et origo mali* in pathological conditions and it is this, therefore, which the psychopathologist is anxious to identify and eradicate². Positively toned constellations do

¹ N.B. 'Negative' tone is, by definition, the kind of tone which tends to drive ideas from consciousness, i.e. to lead to their 'repression.'

² It is rash, perhaps, to suggest the addition of yet another term to the already so difficult vocabulary of psychology, but I think that the word 'Eridogenic,' meaning conflict-producing, might sometimes be useful in this connection. Some authorities use the word 'complex' in a purely pathological sense, others as synonymous with 'constellation' and to denote any relatively stable group of ideas. (Cf. Bernard Hart, *The Psychology of Insanity*.) The trend of general usage seems to be in the direction of the former practice and this will doubtless become universal in due course. Meanwhile the qualifying adjective 'eridogenic,' which perfectly suggests the essential features of the repressed complex, might advantageously be used in cases of doubt.

not interest him and he has not considered the possibility of detecting them. Their existence ought not, however, to be ignored by the psychologist who is concerned with the general theory of mental activity. In studying the changes in mental content corresponding to different conditions it would clearly be unwise to ignore any opportunity of identifying as many elements, or kinds of elements, as possible, and if it can be shown that positively toned constellations and not 'complexes' only can be detected by suitable means, this fact is likely to be of value.

In the paper referred to above I gave some reason for supposing that the psycho-galvanic reflex shows positive affective tone as well as negative, and that disturbances in the reproduction test were predominantly indicative of negative tone; prolongation of reaction time I surmised to be a less definite indicator than either of the others—but to be, on the whole, more indicative of negative than of positive tone.

These opinions were based on the general form of the curves connecting Memory with intensity of affective tone as measured by the indicators concerned; I have since succeeded in bringing out the points in question more clearly by another method.

The material used is that gathered in the course of the experiments on memory. Of the 50 subjects then examined 22 performed the reproduction test; of these I exclude one whose reaction times were not recorded and three who failed to complete the memory part of the experiment. We are thus left with 18 subjects with regard to whom observations were made on all three complex-indicators and who also completed the memory test.

Any reaction given by one of these subjects might be accompanied by any one of the following eight arrangements of complex-indicators:

- | | | | | | | | | | | |
|--------|---|-----|-----|-----|-----|-----|-----|-----|-----------------|-------|
| (i) | None | ... | ... | ... | ... | ... | ... | ... | Call this class | 'O' |
| (ii) | A 'too-long' reaction time only | ... | ... | ... | ... | ... | ... | .. | .. | 'T' |
| (iii) | A 'too-large' galvanometer deflection only | ... | ... | ... | ... | ... | ... | .. | .. | 'G' |
| (iv) | Disturbance in reproduction only | ... | ... | ... | ... | ... | ... | .. | .. | 'R' |
| (v) | A 'too-long' time coupled with a 'too-large' deflection | ... | ... | ... | ... | ... | ... | .. | .. | 'TG' |
| (vi) | A 'too-long' time coupled with a disturbance in reproduction | ... | ... | ... | ... | ... | ... | .. | .. | 'TR' |
| (vii) | A 'too-large' deflection coupled with a disturbance in reproduction | ... | ... | ... | ... | ... | ... | .. | .. | 'GR' |
| (viii) | All three of these | ... | ... | ... | ... | ... | ... | .. | .. | 'TGR' |

(Note.—By 'too-long' time or 'too-large' deflection I mean a time or deflection larger than the Probable Mean, which is that value of the variate above and below which variates are equally numerous; it is also known as the 'median.' Under the heading of 'disturbance in repro-

duction' I include (i) complete failure to remember the original reaction word, (ii) substitution of a different word, and (iii) prolonged hesitation in giving the reproduction.)

I next divided the 518 words learned by the 18 subjects into these eight classes and calculated the mean memory value¹ for each class. The results are given in Table I.

Table I.

Indicator class	No. of words in class	Mean Memory value	Rank	Classes in order of Memory value	Mean Memory value
O	138	6.7	3	G	7.4
T	60	6.7	3	TG	7.2
G	83	7.4	1	O	6.7
R	38	5.7	8	T	6.7
TG	89	7.2	2	GR	6.6
TR	29	6.0	6	TR	6.0
GR	36	6.6	5	TGR	6.0
TGR	45	6.0	6	R	5.7

Mean memory value for all reactions analysed: 6.70.

It must be remembered that the memory value is only a rough test of whether the affective tone evoked by a given word is positive or negative; there is a marked tendency for negatively toned words to drop out early and consequently to show a low memory value, and conversely; but there are innumerable fortuitous and external causes which may interfere with this and cause a word to be remembered or forgotten for reasons quite other than its intrinsic merits. In spite of this the main indications of the table are quite unmistakable and distinctly striking.

First I would call attention to the fact that the one complex-indicator whose presence is uniformly unfavourable to memory, *i.e.* which uniformly indicates negative tone, is disturbance in the reproduction test. The four classes in which this indicator figures are the last four on the list as regards memory value.

If we treat these results somewhat after the fashion of a team-race, giving one mark for presence in the class occupying the first position, two for the second, and so on, the indicator getting the most marks will be that which is most closely associated with the presence of the variety of affective tone which tends to impede memory, with negative tone to wit, and conversely. The marks thus gained are:

¹ The 'memory value' may range from 0, for words never remembered, to 10 for words remembered without difficulty on each of five occasions. Cf. *loc. cit.* pp. 241-242.

'Too-large' galvanometer deflection	15
'Too-long' reaction time	18.5
Disturbance in reproduction	26.5

I conclude therefore that this last phenomenon is not only *a* complex-indicator—and even this has been questioned¹—but *the* complex-indicator *par excellence*².

The appearance of class R (disturbances in reproduction only) at the bottom of the list requires some explanation; one would expect this position to be occupied by class TGR on the ground that the more indicators are present the more intense the affective tone is likely to be. The discrepancy may be due to the large influence on this rather small class of one subject (No. 18) whose learned words included seven characterised by disturbance of reproduction only and scored a total memory value of only 24. This may represent some abnormality on the part of this subject whom, indeed, I rather suspect on other grounds. If these reactions are eliminated from the class its mean memory value rises to 6.3 and the order then becomes:

Table II.

Rank	Indicator class	Mean Memory value
1	G	7.4
2	TG	7.2
3	O	6.7
4	T	6.7
5	GR	6.6
6	R	6.3
7	TR	6.0
8	TGR	6.0

I, personally, regard this order as more correct than the first, but this is a detail of small importance.

The next point to be noted is that class T shows precisely the same mean memory value as class O. That is to say: Prolongation of reaction time alone is not necessarily a complex-indicator; it is only significant if accompanied by other indicators. This is not at all contrary to accepted views; it is commonly recognised that reaction time may sometimes be prolonged on account of purely 'intellectual' difficulties, arising from the rarity of the stimulus word, etc., without the prolongation being due to a complex.

¹ Cf. Jung, *loc. cit.* p. 396.

² Using 'complex' in its common pathological sense and not as synonymous with 'constellation.'

I suspect, however, that this matter is not quite so simple as it might appear at first sight. It will be noticed that the mean memory value of the class TG is markedly above that for class O or for all classes; classes containing 'T' have a memory value below this only when they also contain 'R.' The obvious conclusion is that prolongation of reaction time is a sign of negative affective tone, *i.e.* a complex-indicator, only when accompanied by disturbance in reproduction. I do not think that this conclusion is sufficiently in conformity with general experience of reaction time as a complex-indicator to pass unchallenged, even if we remember, as we should, that we are here dealing with general tendencies rather than with rigid rules. No one would suggest, of course, that every prolongation of reaction time, however small, is necessarily a complex-indicator, for it is universally recognised that only the more salient prolongations are significant. But on the other hand I doubt whether any psycho-therapist accustomed to work with the association test would be willing to admit that all cases in which a significantly too-long time is not accompanied by a disturbance in reproduction are to be regarded as accidental lapses from a general rule. That there is a strong tendency for significant prolongations of reaction time to be accompanied by disturbances in reproduction has, it is true, been shown by Jung¹; but it should be conceded, in my judgment, that prolongation of reaction time alone may on occasion be a true complex-indicator, quite apart from the presence, or merely accidental absence, of disturbance in reproduction. If this be correct we should expect to find the mean memory value of class T somewhat below that for class O and it is necessary to account for the fact that it is not.

I think the explanation is that the class T really consists of three sub-classes, namely:

- (i) Genuinely 'indifferent' words evoking no appreciable affective tone either positive or negative; these would fall in class O were it not for the fact that their reaction time is prolonged for reasons of intellectual difficulty and the like. Their mean memory value would be 6.7.
- (ii) Negatively toned words whose prolonged reaction time is significant, possibly accompanied by some of the miscellaneous complex-indicators enumerated on page 247. If these could be separated out from the remainder their mean memory value would presumably be less than 6.7.

¹ *Loc. cit.* pp. 396, 899.

- (iii) Positively toned words, which through lack of intensity or for other reasons do not produce a too-large galvanometer deflection, but whose reaction time is delayed for the same 'intellectual' reasons as are operative in sub-class (i). These words will have a mean memory value greater than that of the indifferent words and will thus counteract the effect of the words in sub-class (ii).

In spite of this I am strongly of opinion that the statement at the beginning of this section is in general true, that prolongation of reaction time is not likely to be significant unless accompanied by other indicators, and that the proportion of words belonging to sub-classes (ii) and (iii) is small.

It is also probable that some positively toned words may be accompanied by too-long times for the following reasons:

- (a) When a word which evokes markedly agreeable associations, which will as a rule be positively toned, is called out to a subject it seems very possible that his reaction time may be prolonged simply on account of the number of equally acceptable images which crowd in upon him; he suffers, in fact, from an *embarras de richesses*.
- (b) In such circumstances there will also be a tendency for his attention to be diverted from the experiment and to dwell on the pleasing ideas conjured up; this momentary inattention may prolong the reaction time.
- (c) The subject may not wish to reply with the first word which occurs to him although it may be intensely positive to him and in no way connected with a complex. For example: the stimulus word 'woman' would be very likely to evoke the image of the subject's *fiancée*, an image which we may suppose to be accompanied by strong and definitely positive affective tone. The first word to occur to him would naturally be her name; but he might not care to give this as a reaction word in the presence of the experimenter. This would delay the reaction time in spite of the positive tone accompanying the word but it would be ridiculous to suggest that such a prolongation of the time should be considered as a complex-indicator.

This agrees with the form of the curve which I obtained in the course of my memory experiments connecting reaction time with memory value. I found that the mean reaction time for the words least well remembered was greater than that for words better remembered and that there was

a slight tendency for the time to be prolonged in the case of the best-remembered (*i.e.* most positively toned) words.

In view of the foregoing considerations we may regard the position of class T as quite natural.

Perhaps the most important feature of these results is the position of class G at the head of the list. It is closely followed by class TG, and the fact that each of these classes has a mean memory value handsomely in excess of that for class O (no complex-indicators) proves that they consist mainly of positively toned words. This amply confirms my view that the psycho-galvanic reflex detects and measures positive affective tone as well as negative, and shows further that it does so in circumstances—those prevailing with regard to words in class G, to wit—in which other indicators do not.

Class G, in fact, consists mainly of words of comparatively intense positive tone, unaccompanied by prolongation of time or disturbance in reproduction; if the galvanometer had not been used there would have been nothing to distinguish them from indifferent words in class O. In these circumstances O and G, T and TG, R and GR, TR and TGR would have been combined and the results would have been:

Table III.

Class	Composition	No. in class	Mean memory value
O	O + G	221	7.0
T	T + TG	149	7.0
R	R + GR	74	6.2
TR	TR + TGR	74	6.0

Here again the dominance of disturbances in reproduction as indicators of negative tone is very noticeable, as also is the non-significance of too-long times unaccompanied by other signs.

The superior resolving-power, so to speak, which is gained by the method when the galvanometer is used is obvious if we compare these last results with those given in Table I.

The high memory value of class TG is readily accounted for by, and constitutes a powerful vindication of the suggestions put forward on page 254 above. The class consists of words accompanied by strong positive tone whose reaction time is prolonged for one of the reasons there enumerated.

It seems reasonable to suppose that the influence of positively toned words on the reaction time will be approximately proportional to the intensity of their tone; or, at any rate, that prolongation of the time will occur with more intensity, rather than with less intensely toned

words. We should therefore expect that the mean intensity of tone in class TG would be greater than in class G and, inasmuch as this tone is positive, that the mean memory value would also be greater.

The former is the case as will be seen later. That the latter is not may, I think, be explained as follows: complex-indicators, other than those here analysed, are rare in my material, but no fewer than nine are to be found in class TG; the mean memory value of these is 5.2 and if they are eliminated from the class the mean memory value of the remainder is 7.4 which raises it to the position of equal first with class G. (Actually, if we take the mean to another place of decimals we have—mean for class TG = 7.425, mean for class G = 7.41.)

Whether this alteration is legitimate is a matter of opinion into which subjective factors enter largely. I, personally, think that it is, and I am strengthened in this view by considerations of the relative intensity of the tone in different classes as shown by the mean magnitude of the complex-indicators.

Since the Probable Means of the reaction times and galvanometer deflections vary considerably in different subjects it might be unwise simply to calculate the arithmetic means of the times and deviations in the different classes and to use these as measures of the intensity of affective tone; to do so would involve a danger of the classes being dominated by a few subjects whose probable means are unusually high. I prefer to express each value as a percentage of the corresponding Probable Mean and to use the mean of these percentages as the measure of intensity; I think this plan might profitably be adopted in all similar work which may need to be compared with results obtained by other experimenters. It is equivalent to reducing all subjects to terms of a 'standard subject' whose Probable Mean is 100 units.

In this particular case it makes no difference which method we use. The results obtained by both are shown below:

Table IV.

Indicator Class	Mean percentage of P.M.		Arithmetic Mean	
	RT	GD	RT	GD
TG	151	269	17.4	17.5
G	—	246	—	15.5
T	130	—	13.4	—
O	—	—	—	—
GR	—	235	—	13.9
TR	132	—	13.3	—
TGR	170	242	17.5	14.0
R	—	—	—	—

This shows that class TG is more intensely toned than either of classes T or G, and class TGR than either TR or GR; this applies both to reaction time and galvanometer deflection; which is just what we should expect. The discrepancy between the percentage of the Probable Mean and the Arithmetic Mean in the case of the reaction time in classes T and TR is negligible.

It is possible to apply a further check to the results. If the words learned form a reasonably representative sample of the whole of the material available there ought to be some degree of correspondence between the mean values of the reaction time and the galvanometer deflection, in the various classes, when calculated from all the reactions, and the values yielded by the learned words only. The correspondence will not be quantitatively exact because in the case of my first 25 subjects, of whom 15 are included in the 18 here concerned, I selected to be learned the 15 words giving the largest galvanometer deflection and the 15 giving the smallest. This was done with the idea of giving affective tone the best possible chance of exhibiting any influence on memory which it might have, and this circumstance affects the quantitative relations between the 'sample' and the remainder of the material in a somewhat complicated way.

The comparatively large number of data here available makes it unnecessary to use the percentage method. The values of the arithmetic means for the whole material are:

Table V.

Indicator Class	No. in class	A.M. of R.T.	A.M. of G.D.	Proportions
TG	239	15.6	14.5	Positively toned 31.4 %
G	307	—	12.4	
T	255	14.6	—	Neutral 42.2 %
O	480	—	—	
GR	105	—	11.2	Negatively toned 26.4 %
TR	119	13.9	—	
TGR	107	16.8	11.7	
R	129	—	—	

The correspondence between these values and those given in the preceding table is obviously very close.

I have entered into these details because I want to show how very concordant the results are and how those obtained by one method of treating the data harmonise with those obtained by another.

When we remember how rough a test of the quality of affective tone the 'memory value' of a word must necessarily be in practice, and how

many accidental causes may distort and obscure its indications, it will be admitted, I believe, that this concordance is remarkable and justifies us in regarding the results as possessed of a high degree of reliability.

A few miscellaneous observations concerning complex-indicators may be noted here.

In the 1741 reactions given by the 18 subjects dealt with above there are 460 disturbances in reproduction; this is equal to 26.9 % as compared with Jung's "33 % not reproduced¹." It is not clear whether this last figure includes associations reproduced with great hesitation, presumably it does. I attribute the difference between these two values to the fact that among the 28 subjects dealt with by Jung there were 25 nervous and mental patients of different kinds, whereas all my subjects were normal.

Jung found that "on the average, 62.2 % of the absent reproductions lie, as regards the reaction-times, above the probable mean"; I find only 49.2 %. This difference is probably due to the same cause. Abnormal subjects will, in general, possess more numerous and stronger complexes than my normal subjects, and the more intense tone aroused by the complex-striking stimulus words—indicated in both cases by the disturbance of reproduction—will tend to prolong the reaction time more frequently in the case of the abnormal subjects.

In view of the evidence I have brought forward above which shows that disturbance in reproduction is more intimately associated with negative affective tone than are either of the other two complex-indicators discussed, I do not think it is necessary to reproduce from my data the figures analogous to those which Jung gives in favour of regarding this phenomenon as significant. It may be pointed out, however, that even among his so largely abnormal subjects, it is probable that a certain number of reaction times were prolonged on account of positive affective tone aroused by the stimulus word, or on account of intellectual difficulties. If Jung had been able to distinguish between such prolongations and those due to negative tone his figures would, presumably, have borne out his contention even more strongly than they did.

There can be no doubt whatever that for quantitative work the galvanometer deflection is a far more valuable indicator than the reaction time. It is not under voluntary control and is not affected to any appreciable extent by non-significant intellectual factors such as sometimes prolong reaction time. Moreover, the absolute magnitude of

¹ *Loc. cit.* p. 401.

the deflections can, in general, be magnified to any extent desired and read with a corresponding degree of precision.

Still more important is the fact that the magnitude of the galvanometer deflection appears to be approximately proportional to the intensity of the corresponding affective tone, however great the deflection; this is not the case with the reaction time. It is obvious on *a priori* grounds that there must be a point at which prolongation of reaction

Table VI.

Word	Mean R.T.	Word	Mean R.T.	Word	Mean R.T.	Word	Mean R.T.	Word	Mean R.T.
1 Name	18.2	21 Wicked	13.6	41 Choice	12.5	61 Bury	11.5	81 Motor	10.8
2 Friend	17.4	22 Afraid	13.5	42 Woman	12.4	62 Wait	11.5	82 Clean	10.8
3 Despise	17.3	23 Dress	13.4	43 Speak	12.3	63 Water	11.4	83 Rich	10.7
4 Make	15.9	24 Dead	13.4	44 Fight	12.2	64 Hunger	11.4	84 Table	10.6
5 Sad	15.8	25 Love	13.3	45 Swim	12.1	65 Glass	11.4	85 Sing	10.4
6 Proud	15.4	26 Luck	13.1	46 Jump	12.1	66 Travel	11.3	86 White	10.4
7 Home	15.2	27 Long	13.1	47 Cow	12.1	67 Flower	11.3	87 Pencil	10.4
8 Nasty	14.9	28 State	13.1	48 Street	12.0	68 Bed	11.3	88 Old	10.4
9 Marry	14.8	29 Silly	12.9	49 Village	11.8	69 Evil	11.3	89 Bird	10.3
10 Habit	14.7	30 Stalk	12.8	50 Bread	11.8	70 Child	11.2	90 Walk	10.3
11 Pity	14.5	31 Pray	12.8	51 Wound	11.8	71 Frog	11.1	91 Work	10.3
12 Happy	14.5	32 Money	12.8	52 Cold	11.7	72 Ship	11.1	92 Carrot	10.2
13 Angry	14.2	33 War	12.8	53 Salt	11.7	73 Lamp	11.0	93 Chair	10.2
14 Bring	14.2	34 Try	12.8	54 Paper	11.7	74 Blue	10.9	94 Ink	9.9
15 Plum	14.0	35 Bag	12.8	55 Divorce	11.6	75 Box	10.9	95 Book	9.8
16 Dance	13.8	36 Insult	12.8	56 Beat	11.6	76 Pond	10.8	96 Head	9.6
17 Worry	13.7	37 Carry	12.6	57 Big	11.6	77 Tree	10.8	97 Horse	9.6
18 Kiss	13.7	38 Ask	12.5	58 Yellow	11.6	78 Finger	10.8	98 Green	9.4
19 Brother	13.6	39 Sick	12.5	59 Cook	11.5	79 Give	10.8	99 Needle	9.3
20 Family	13.6	40 Wine	12.5	60 Go	11.5	80 Doctor	10.8	100 Shut	9.2

Table VII.

Word	Deflec- tion	Word	Deflec- tion	Word	Deflec- tion	Word	Deflec- tion	Word	Deflec- tion
1 Kiss	72.8	21 Worry	33.0	41 Book	26.1	61 Cold	23.0	81 Bird	19.6
2 Love	59.5	22 Insult	32.5	42 Travel	25.9	62 Long	22.7	82 Bread	19.6
3 Marry	58.5	23 Friend	32.2	43 Sick	25.8	63 Go	22.6	83 Old	19.3
4 Divorce	50.8	24 Head	31.7	44 Bag	25.8	64 Cook	22.3	84 Cow	19.0
5 Name	48.7	25 Angry	31.5	45 Water	25.6	65 Yellow	22.2	85 Bring	19.0
6 Woman	40.3	26 Wine	30.9	46 Home	25.4	66 Chair	21.7	86 Clean	18.8
7 Wound	38.0	27 Luck	30.8	47 Big	25.3	67 Finger	21.5	87 Ink	18.7
8 Dance	37.4	28 Green	30.4	48 Bed	25.2	68 Sad	21.4	88 Shut	18.6
9 Afraid	36.8	29 Ask	30.0	49 Silly	25.2	69 Tree	21.2	89 Table	18.5
10 Proud	36.7	30 Make	29.9	50 Brother	25.2	70 Needle	21.1	90 Work	18.3
11 Habit	36.6	31 Pity	29.7	51 Street	24.9	71 Blue	20.6	91 Carrot	18.2
12 Money	35.6	32 Choice	29.7	52 Beat	24.6	72 Ship	20.5	92 Bury	18.0
13 Fight	35.0	33 Dress	28.5	53 Carry	24.5	73 Motor	20.4	93 Hunger	17.9
14 Child	35.0	34 Wicked	28.4	54 Wait	24.4	74 Frog	20.2	94 White	17.8
15 State	34.8	35 Dead	27.6	55 Speak	24.3	75 Walk	20.1	95 Glass	17.6
16 Despise	34.7	36 Sing	27.6	56 Box	23.9	76 Try	20.0	96 Give	16.7
17 War	34.1	37 Horse	27.1	57 Nasty	23.6	77 Plum	20.0	97 Flower	16.1
18 Family	33.6	38 Evil	27.0	58 Jump	23.5	78 Village	19.9	98 Pond	15.5
19 Happy	33.4	39 Doctor	26.9	59 Paper	23.2	79 Rich	19.9	99 Pencil	15.4
20 Pray	33.1	40 Stalk	26.2	60 Lamp	23.1	80 Salt	19.8	100 Swim	14.2

time ceases to be proportionally significant. No one would suggest, for example, that a time of one minute, say, in a series whose Probable Mean is two seconds, is likely to be the result of an affective state 15 times as intense as that responsible for a time of four seconds. But such considerations cannot be extended to the galvanometer deflections. Table VI shows the 100 words of my list arranged in the order of magnitude of their mean reaction times, calculated for the whole of the 50 subjects examined; Table VII shows the words similarly arranged on a basis of their mean galvanometer deflections.

There can be no doubt that the order of words given by the galvanometer represents their relative affective value far more accurately than that given by the reaction time.

The following points may be noted:

- (i) The highest value in the galvanometer series is 5.12 times as great as the lowest; in the time series it is only 1.98 times as great. The 'resolving power' of the galvanometer is, therefore, rather more than $2\frac{1}{2}$ times that of the reaction time.
- (ii) In accordance with this we find in the reaction time series seven pairs of words whose mean time is the same, seven such groups of three words each, five of four words each, and two of seven words each. In the galvanometer series there are only eight such pairs and one group of three.
The galvanometer therefore differentiates gradations of affective tone with much greater delicacy than does the reaction time.
- (iii) The first six words on the galvanometer list are Kiss, Love, Marry, Divorce, Name, Woman. Of these, five are obviously closely connected with sex-life and the other, Name, is probably constellated by the same ideas. These six words stand out head and shoulders above the remainder of the series, as I pointed out in my paper on memory. (N.B. The effect is very noticeable if the series is represented graphically.) Their mean value is 145 % of that of the seventh word and 220 % of that of the Probable Mean of the series.

Compare with these the first six words of the time series, Name¹, Friend, Despise, Make, Sad, Proud. This is not nearly so homogeneous a group; its mean value is only 110 % of the seventh word and only 141 % of the Probable Mean of the series.

¹ For the probable reason of the very long time for this word, compare page 254. The first name to occur is likely to be that of a wife, *fiancée*, lover or other person of sexual significance to the subject.

This marked difference must be due to some quality, common to all members of the homogeneous group, which the galvanometer picks out better than the reaction time. This can only be a common high affective value.

A further indication of the comparative untrustworthiness of the reaction time as a quantitative indicator is afforded by the fact that the coefficient of correlation between the mean galvanometer deflection and mean reaction time for the series of words is *increased* if we reduce the excessively long times.

The coefficient of correlation for the two series as they stand is + .470. If we eliminate all reaction times more than 100 % greater than the arithmetic mean time of the subject concerned, and substitute for each a value equal to the arithmetic mean plus 100 %, the coefficient of correlation rises to + .488. (Example: The arithmetic mean of the reaction time for subject No. 8 is 10.5, his reaction time for reaction 84 is 24; I substitute 21, that is to say 100 % more than the arithmetic mean, for this value when computing the mean time for reaction 84—stimulus word 'Afraid'—for the purposes of the new correlation.)

This proves that 'much-too-long' times are not significant in proportion to their length; for these two series only correlate in so far as the magnitudes of both are due to a common cause, intensity of affective tone, to wit; it follows that any systematic alteration to one series which increases the coefficient of correlation does so by making it conform more closely to the variations in the working of the common cause.

It would be possible on these lines to determine at what point, in general, continued prolongation of reaction time ceases to be significant; but this would take us very far and is not a point of sufficient interest to be worth investigating.

SUMMARY.

(i) *There are two quite definite, distinct and opposite varieties of affective tone, which may conveniently be called 'positive' and 'negative'; of these the former tends to promote the accession to consciousness of the ideas to which it is concomitant, or the incidence of attention upon them, while the latter produces the opposite effect.*

(ii) *Prolongation of reaction time alone is not a reliable complex-indicator. In a large number of cases (the whole of class TG mentioned above and part of class T) it is due to positive affective tone.*

(iii) *Disturbance in reproduction is by far the best complex-indicator—*

or, at least, the most reliable indication of negative tone; I personally regard these two expressions as synonymous.

(iv) *The galvanometer detects positive tone as well as negative and in many cases (the whole of class G) does so when the reaction time does not.*

(v) *Intensity of affective tone, whether positive or negative, increases both reaction time and galvanometer deflection. In general the most positively toned words are those with too-long times and too-large deflections; next come those with too-large deflections only. Words with no complex-indicators, or with too-long times only, are mostly indifferent. Words with disturbance in the reproduction are almost invariably negatively toned. Words having too-long times and too-large deflections are, on the whole, more intensely toned, whether positively or negatively, than those having too-long times or too-large deflections only.*

(vi) *For quantitative work the galvanometer-deflection of the psychogalvanic reflex is markedly superior to the reaction time.*

(vii) *The 'resolving' power and consequently the scope and utility of the word association method is greatly increased if the galvanometer is used in addition to the reaction time. The experimenter can divide his reactions into eight classes, all possessed of quantitatively and qualitatively distinct attributes, instead of into four only.*

(viii) *The memory test enables us to determine the more important relative properties of these classes. It is a very laborious method and somewhat crude, but the results it yields show a remarkable concordance and it is probable that the conclusions arrived at are reliable.*

THE RELATION BETWEEN COMPLEX INDICATORS AND THE FORM OF THE ASSOCIATION.

By W. WHATELY SMITH.

In the preceding paper I investigated the relations which exist between the affective tone aroused by a stimulus word and the 'complex indicators' which accompany the reaction. I did this with regard to three indicators, namely,

- (i) 'too-long' reaction time,
- (ii) 'too-large' psycho-galvanic reflex,
- (iii) disturbance of reproduction in Jung's reproduction test.

I showed that, if we indicate the presence of a 'too-long' time by T, of a 'too-large' reflex by G, of disturbance in reproduction by R, and the absence of any indicator by O, the relation between the affective tone of words and the various classes into which they can be divided according to their indicators is as follows:

Classes G and TG consist in general of positively toned words.

"	O and T	"	"	neutrally	"	"
"	R, TR, GR and TGR	"	"	negatively	"	"

The question now arises as to whether there is any relation between the affective tone of a word and the *form* of the association, *i.e.* by co-ordination, co-existence, predicate, etc.

Sundry attempts have been made by various workers to investigate this point by determining the mean reaction time of the different classes of association, but without leading to any very uniform or satisfactory results. This is not surprising for, as I have shown, prolongation of reaction time *alone* is likely to be a very unsatisfactory and misleading guide; it may be prolonged on account of negative tone, of comparatively intense positive tone, or of purely intellectual factors which have nothing to do with affective tone at all. It is necessary to discriminate between positively, neutrally and negatively toned words before we can hope to throw any helpful light on the question. I have attempted to do so in this paper.

I wholly agree with Jung's statement that "Everyone who does

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practical work in association has found the classification of the results the hardest and most tedious part." Many schemes have been devised, none are wholly satisfactory. If the system used is very elaborate and refined the results are likely to be unduly influenced by subjective factors and an immense mass of material is needed in order to give a reasonably large number of data in the rarer sub-classes; if it is too coarse we are liable to miss interesting points which a more detailed analysis might have brought to light. The additional labour entailed by the use of a very elaborate system also greatly reduces its practical value.

I therefore feel it necessary to give some account of the system which I have adopted and of the principles which have guided me in applying it.

I may observe in passing that the first and most important principle which should be remembered throughout all work of this kind is that the classification should be in accordance with the workings of the *subject's* mind and not the experimenter's. A rigidly formal system based on purely logical or grammatical considerations is likely to ignore just those idiosyncrasies which we wish to study, and so to prove of little value. I shall discuss this question of the proper basis for classification in more detail at a later stage.

The system which I finally adopted, after a few preliminary trials, is based on that given by Jung¹.

The primary division is between 'inner' and 'outer' associations. The criterion which I have tried to bear in mind in distinguishing between the two is perhaps best expressed by saying that in the case of 'outer' associations the connection between the ideas in the subject's mind has been formed for him, so to speak as a result of objective experience, whereas 'inner' associations are a result of what I may term the 'digestion' of experiences by the mind itself.

For example, the associations Cow—field, or Wine—bottle, are outer associations; one is accustomed to observe cows in fields and wine in bottles, such associations are given ready-made, so to speak, and do not demand any subjective mental work for their formation. The same applies to verbal associations such as Long—short, Black—white, which are constantly 'given' in conjunction. On the other hand such associations as Cow—animal, Frog—nasty, Child—nice, are to some extent dependent upon processes of analysis, synthesis, systematisation and so forth in our minds. This last idea can be clearly recognised in Jung's classification of associations by co-ordination into:

¹ *Studies in Word Association*, pp. 13-38.

- (i) Coadjunction, (a) By a common supraconcept.
 (b) By similarity.
 (c) By inner relationship.
 (d) By outer relationship.
- (ii) Subordination.
- (iii) Supraordination.
- (iv) Contrast (other than habitual verbal contrasts).
- (v) Co-ordination of undetermined quality.

This principle is, I think, reasonably unambiguous and on *a priori* grounds seems the kind of distinction which is likely to prove helpful.

Its application presents certain difficulties, however, when we come to the consideration of the predicate type of association. Jung classes all varieties of predicate reaction together as inner associations, but I have grave doubts as to whether this is either legitimate or profitable.

I quite agree that predicates containing an element of personal opinion should be so regarded. But it seems to me that such reactions as Wine—red, Water—wet, Tree—green, which I may term ‘simple’ predicates, are just as much ‘outer’ associations as Wine—bottle, Water—pond, Tree—wood. They are equally ‘given ready-made’ as a part of objective experience and are equally lacking in any product of subjective mental activity. Similar considerations also apply in some measure to very many cases of ‘subject relationships’ and ‘object relationships,’ *e.g.* Jump—horse, Swim—fish, Make—bread. There are, however, certain border-line cases, such as Speak—explicitly, which are difficult to deal with as they clearly contain a strong personal or truly subjective element. I shall return to this point later, but for the present I conform to Jung’s arrangement.

Before proceeding to describe and exemplify the system I have used, I ought to say that I have throughout treated reactions as reversible. That is to say, I have not discriminated between the stimulus and reaction words; Tree—green, for example, has been treated just the same as Green—tree, Horse—ride as if it were Ride—horse, and so forth.

The classes into which I finally divided the words were:

A. INNER ASSOCIATIONS.

I. *Co-ordination.* This class is substantially identical with that of Jung. It is the vaguest and least satisfactory of the classes and I find a tendency in myself to relegate to it associations which I cannot place with certainty in any other class. But Jung himself allows a certain

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elasticity¹ and I have reduced this tendency to a minimum by omitting altogether from the classification a few words about which I felt real doubt.

I do not feel it necessary to give examples of this class as my divergence from Jung is inappreciable and even so occurs almost exclusively in his last and vaguest sub-class.

II. *Predicates*. I recognise here five sub-classes which are easily distinguishable.

- (a) *Simple predicates*. By this I mean reactions in which the stimulus word is qualified by the reaction word, or *vice versa*, in a way which contains no element of personal opinion or judgment of value. Examples:

Tree — green.	Go — quickly.
Lamp — electric.	Carrot — red.
Swim — fast.	Try — hard.

- (b) *Predicates expressive of personal opinion or judgment of value*. This class needs no further definition. Examples:

Love — good.	Work — dull.
Kiss — good.	Marry — worse.
Silly — bad.	Chair — useful.
Frog — unpleasant.	Old — beautiful.
Home — useless.	Travel — pleasant.

- (c) *Predicates of 'subject relationship.'* In this class the two associated words refer to some activity of which one is the subject. Examples:

Frog — jump.	Sing — girl.
Horse — run.	Tree — grow.
Bird — fly.	Go — boy.
Carry — horse.	Swim — fish.
Needle — prick.	Jump — horse.

- (d) *Predicates of 'object relationship.'* Here the two words relate to some activity of which one is the object. Examples:

Stalk — deer.	Despise — man.
Wine — drink.	Love — man.
Kiss — me ² .	Make — bread.
Bring — sheep ² .	Book — read.
Bury — dead.	Carry — weight.

¹ *Loc. cit.* p. 21.

² These are good examples of the border-line cases mentioned above.

(e) *Predicates defining place, time, means, etc.* Examples:

Pray — church.	Walk — promenade.
Sing — King's Chapel.	Fight — fists.
Marry — August.	Go — back.
Beat — stick.	Cook — kitchen.
Travel — abroad.	House — live.

III. *Causal dependence.* This class consists of associations in which one idea is causally dependent on the other or is a common consequence of it; I have extended it to include cases in which the idea expressed by one word may reasonably be regarded as a necessary antecedent to that expressed by the other. Examples:

Ask — reply.	Give — have.
Lamp — light.	Afraid — danger.
Rich — money.	Angry — pain.
Worry — exams.	Marry — child.
Clean — wash.	Sad — lonely.

B. OUTER ASSOCIATIONS.

IV. *Co-existence.* Associations which arise from the experience of the ideas concerned in temporal or spatial juxtaposition, including cases in which one word represents a *part* of the other. Examples:

Cow — field.	Head — hair.
Table — chair.	Ink — pen.
Tree — leaves.	Paper — pencil.
Home — father.	Motor — carburettor.

Wine — bottle.

I also include here associations in which one word forms an essential part or concomitant of an activity denoted by the other. Examples:

Pencil — write.	Try — rugger.
Swim — river.	Jump — sports.

Ride — horse.

V. *Paraphrases, Synonyms, etc.* This is a slightly widened version of Jung's 'identity' class. The characteristic feature is that the reaction word does not possess a meaning radically different from that of the stimulus word; substantially the same idea is represented in a slightly altered form. Examples:

Try — endeavour.	Shut — closed.
Beat — strike.	Evil — bad.
Say — speak.	Child — baby.
Worry — trouble.	Village — town.
Happy — pleased.	Street — road.

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VI. *Verbal forms.* I have here recognised three sub-classes.

(a) *Reactions determined by experience of the words as forming part of common expressions and phrases in daily use.* Examples:

Long — short.	Choice — Hobson's.
White — black.	Needle — Cleopatra's.
Walk — run.	Fight — good.
Sing — song.	Name — number ¹ .
Plum — apple ¹ .	Hunger — thirst.
Shut — open.	Clean — dirty.
Rich — poor.	Silly — fool.
Old — young.	Wine — women.
Big — small.	Insult — injury.

Go — come.

(b) *Word-completion.* A word is added which, with the stimulus word, forms a compound word. Examples:

Wine — merchant.	Ink — stand.
Wool — gathering.	Motor — car.

Green — ever.

(c) *Clangs, rhymes and word-completion by syllables which cannot stand alone.* Examples:

State — estate.	Speak — speech.
Pray — prayer.	Fight — fate.
Habit — habitat.	Dress — undress.
Friend — friendless.	Luck — duck.
Silly — silliness.	Family — families.

C. OTHER CLASSES.

VII. '*Indirect*' associations. I feel that I may be criticised for making a special class for these associations, contrary to the opinion of some authorities. None the less I believe that it is desirable to do this. By '*indirect*' associations I do not mean "that mode of reaction which is only understandable by the assumption of a middle term different from the stimulus—or reaction—word²." Or rather I do not mean merely this, although, in a sense, some such reactions may belong to my '*indirect*' class.

The principle by which I have been guided in assigning words to this class is this: most associations are readily comprehensible by the experimenter; even although they may not be what he would have given himself or would have expected, he can easily see the kind of connections which result in their formation. There are some, on the other hand, in

¹ From recent experiences in H.M. Forces.

² Jung, *loc. cit.* p. 29.

which the reaction word seems utterly unrelated to the stimulus word and not to be accounted for by perseveration of ideas aroused by a preceding reaction. These must result from some past experience *peculiar to the individual subject*.

It is just such associations which on account of their intimate personal origin are likely to be of the very first importance in practical work and it is therefore especially well worth while to ascertain whether they have any characteristic affective properties.

I, personally, have found no difficulty in assigning associations to this class and have, indeed, done so as a rule with considerably more confidence than I have felt in several other instances. I give the following examples:

Frog	— emotion.	Pity	— Blackpool.
Blue	— donkey.	Kiss	— Whitstable ¹ .
Frog	— crowd.	Glass	— back.
Make	— rabbit.	Proud	— have.
Sing	— red.	Carrot	— brutal.
Dead	— coat.	Marry	— die.
Long	— badge.	Habit	— send.
Brother	— must.	Ask	— lonely.
Bed	— bury.	White	— experiment.
Sing	— feel.	Wine	— preparation.

It will be seen later that the words in this class are, as a matter of fact, distinguished by marked affective properties. This class should clearly be included under the main heading of 'Inner Associations' but, for the moment, I prefer to keep it separate.

VIII. This is not a wholly separate class. I have counted in it a number of 'freaks' some of which were also allotted to other classes. It includes the most conspicuous examples of class VII; cases when the reaction consists of several words instead of the usual single word; reaction by 'stereotypes,' that is to say the same reaction word repeated many times in the course of the experiment; reaction by interjections, etc., etc.

When I had classified the reactions into these eight classes I counted how many in each class were accompanied by no complex indicator, how many by 'too-long' reaction time only, how many by 'too-large' deflection only, how many by both, and so on. The results are shown in Table I.

¹ This is presumably equally eligible for class II (c), but it is very personal and I prefer to place it here.

Table I.

Indicator class	Inner associations						Outer associations						Total	VII	VIII
	I	II a	II b	II c	II d	II e	III	IV	V	VI a	VI b	VI c			
O	70	69	11	13	42	7	10	74	19	130	10	2	461	4	2
T	80	64	21	11	39	14	16	68	29	79	10	6	253	24	9
	40	36	5	4	25	11	8	54	24	30	2	7			
G	44	35	11	6	22	8	9	37	17	43	6	3	301	13	5
	46	35	8	11	26	9	14	55	17	59	10	3			
R	52	42	14	7	25	9	10	45	19	52	7	4	117	16	6
	24	14	11	2	8	4	4	17	10	11	3	0			
TG	19	16	5	3	10	4	4	17	7	20	3	2	227	6	2
	52	37	18	1	20	9	11	24	13	25	4	5			
TR	39	31	10	5	20	7	8	34	14	39	5	3	107	12	5
	16	15	6	3	7	4	3	17	7	12	3	0			
GR	19	15	5	3	9	3	4	16	7	18	2	1	91	6	2
	21	10	8	1	7	2	1	6	6	10	4	1			
TGR	16	13	4	2	8	3	3	13	6	16	2	1	101	5	2
	17	14	5	2	9	3	3	11	8	8	1	4			
Totals	287	229	75	39	141	50	57	246	104	285	37	22	1658	86	33

Table II.

Indicator class	Inner associations						Outer associations						Total	VII	VIII
	I	II a	II b	II c	II d	II e	III	IV	V	VI a	VI b	VI c			
Positively toned (G and TG)	98	72	26	12	46	18	25	79	30	84	14	8	528	16	12
Neutral (O and T)	91	73	24	12	45	16	18	79	33	91	12	7	714	27	11
	110	105	16	17	67	18	18	128	43	180	12	9			
Negatively toned (R, GR, TR, TGR)	124	99	32	17	61	22	25	105	46	122	16	9	416	37	14
	79	52	33	10	28	14	14	39	31	41	11	5			
	71	57	19	10	35	13	14	61	26	71	9	5		22	8
Totals	287	229	75	39	141	50	57	246	104	285	37	22	1658	86	33

In Table I, as in those which follow, the ordinary figures show the actual observed number of reactions; the italic figures show the number, computed to the nearest integer, which we should expect to find if chance only were at work.

This last number is obtained as follows: if we have N objects of which n_1 belong to class p_1 , n_2 to class p_2 , n_3 to class p_3 etc. (so that $\Sigma n = N$) and of which m_1 also belong to class q_1 , m_2 to class q_2 , m_3 to class q_3 etc. (so that $\Sigma m = N$), then by the ordinary theory of probability we should expect the number belonging to both class p_x and q_y to be

$$\frac{n_x \times m_y}{N}.$$

Thus 287 reactions out of 1658 fall in class I and 301 out of 1658 in class G; we should therefore expect to find that $\frac{287 \times 301}{1658} = 52$, very nearly, of the members of class I were also members of class TG.

It will be noticed that although in many cases the agreement between the actual numbers and the 'probable' numbers is very close, there are others in which there is a marked difference; these are the cases in which the connection between affective tone and reaction form shows itself.

In view of the evidence which I brought forward in the preceding paper, I regard it as incontestable that the affective classes G and TG chiefly contain positively toned words, classes O and T mainly in-different words and classes R, GR, TR and TGR mainly negatively toned words. I do not consider, however, that it is practicable to discriminate further than this at present, or to avail ourselves of the quantitative differences which I gave reason for supposing to exist between the classes which make up these three main groups.

I therefore simplify Table I by classifying the reactions, with regard to their affective tone, into 'positively toned,' 'neutral' and 'negatively toned.' The result is shown in Table II.

The behaviour of the various classes can be more clearly seen here than in the original table. I regard the indications afforded by this table as reliable; in most cases we have a good number of reactions in a class and it must be remembered that the crudity and liability to fortuitous interference which made the memory test, used in the preceding paper, so insensitive a criterion, so to speak, of the quality of affective tone, no longer apply here. Once we have determined the qualitative properties of the different indicator classes we can say with

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considerable assurance that the reactions belonging to them possess those affective properties.

Class I (Co-ordination) shows a slight but distinct tendency towards toned as opposed to neutral reactions; the actual figures (98 and 79) for both positively and negatively toned reactions are greater than those indicated by probability (91 and 71 respectively), while the actual figure for neutral reactions is well below the probable figure (110 to 124).

Class II (Predicates) is worth considering in some detail especially in view of the comments I made about it above.

Sub-class (a), consisting of 'simple' predicates, shows a slight tendency to favour neutral (105 'actual' to 99 'probable'), at the expense of negatively toned reactions (52 'actual' to 57 'probable').

II (b)—predicates implying personal opinions or judgments of value—has a marked excess of negatively toned and a marked deficiency of neutral reactions (33 'actual' to 19 'probable' and 16 'actual' to 32 'probable' respectively).

II (c)—subject relationship—conforms exactly to the probable values.

II (d)—object relationship—like II (a), somewhat favours the neutral reactions at the expense of the negatively toned.

II (e)—definition of time, place, means etc.—is a very small class and its deviations from the probable values appear to me to be insignificant.

In fact II (b) shows a characteristic tendency not found in any other form of predicate reaction. It should be regarded, in my opinion, as essentially an 'inner' association, to which general type its affective properties conform, while II (a) is psychologically indistinguishable from the emphatically 'outer' association of co-existence. II (c) and (d) are less obviously 'outer' but in the majority of cases they conform much more nearly to this group than to 'inner' associations. On the whole I consider that they ought to be classed as 'outer.' II (e) I think should be retained in the 'inner' group.

To insist on such widely differing types of reaction as II (a) and II (b) being kept in the same class simply because they are both grammatical predicates is, surely, mere pedantry.

Class III (Causal dependence) is again rather small; its tendency is to favour the positively toned reactions at the expense of the neutral.

Class IV (Co-existence) is the first of the indisputably 'outer' types. It is a large class and shows an unmistakable tendency towards neutral reactions at the expense of the negatively toned.

Class V (Paraphrases, synonyms, etc.) shows a slight and probably

negligible tendency in favour of negatively toned reactions at the expense of the other two.

Class VI (a) (Verbal reactions depending on common phrases, etc.) is again large and shows a very marked tendency towards neutral reactions, mainly achieved at the expense of the negatively toned.

Classes VI (b) and (c) are exiguous and their divergences from 'probable' values are small. They should probably be included in class VI (a).

In Class VII (Indirect reactions) the tendency is unmistakable¹; there is a great preponderance of negatively toned reactions at the expense of both the positively toned and the neutral, especially the latter.

Class VIII ('Freaks') is very small, but I think that the marked excess of negatively toned reactions (16 'actual' to 8 'probable') is almost certainly significant.

We may now simplify the classification still further and compare the whole of the inner associations with the outer.

Table III.

	Inner associations	Outer associations	Class VII	Totals
Positively toned	297	215	16	528
	279	224	27	
Neutral ...	351	352	11	714
	380	298	37	
Negatively toned	230	127	59	416
	219	172	22	
Totals ...	878	694	86	1658

It is clear that inner associations contain a marked preponderance of positively and negatively toned reactions and a marked lack of neutral reactions; outer associations favour the neutral reactions chiefly at the expense of the negatively toned.

As I have already observed, I consider that class VII should be included among inner associations. I have kept it distinct up to this point, partly because its type of association is, by definition, somewhat obscure and partly because I wanted to show the tendencies of inner associations without there being any question of their being unduly influenced by the inclusion of reaction forms which might appear of dubious eligibility. When class VII is thus included the figures become:

¹ In this class there are 23 reactions actually observed in the 'indicator' class TR; the 'probable' number is 6. The probability of this discrepancy being due to chance is about 2.3×10^{-7} .

Table IV.

	Inner associations	Outer associations	Totals
Positively toned	313	215	528
	<i>306</i>	<i>224</i>	
Neutral... ..	362	352	714
	<i>417</i>	<i>298</i>	
Negatively toned	289	127	416
	<i>241</i>	<i>172</i>	
Totals	964	694	1658

Inner associations show the same characteristics as before but more markedly with regard to negatively toned reaction and less so with regard to positively toned.

Finally, I shall assume that my contentions as regards Predicate forms are warranted and shall transfer classes II (a), II (c) and II (d) to the outer associations. The figures then become:

Table V.

	Inner associations	Outer associations	Totals
Positively toned	183	345	528
	<i>176</i>	<i>354</i>	
Neutral... ..	173	541 ¹	714
	<i>240</i>	<i>475</i>	
Negatively toned	199	217	416
	<i>139</i>	<i>274</i>	
Totals	555	1103	1658

This again greatly increases the relative predominance of negatively toned reactions among the inner associations; it slightly reduces the relative differences between actual and probable figures for outer associations of all three kinds—they are, in fact, slightly diluted by the addition of a number of reactions distributed in close accordance with probability.

It may be convenient to keep these predicate classes II (a), II (c) and II (d) with the other predicates for certain purposes, but I think there can be no doubt that if we are considering reactions from the affective point of view, their proper place is with the outer associations. And after all it is the affective tone which we are seeking in all practical applications of association methods; reactions unaccompanied by it are of no great value, they do not lead to significant complexes of pathological importance or even to constellations of theoretical interest.

¹ The chance of this difference between the actual and probable figures being accidental is about one in two million.

The affectively toned reactions are the important reactions, especially—for clinical work—those which are negatively toned. If therefore we are desirous of ‘summing up’ a subject in the way which is sometimes attempted by study of the ‘reaction-type,’ it is important that we should adopt the system of classification which will most clearly show the relative number of reactions constellated by ‘complexes’—*i.e.* which are negatively toned—and that we should know which classes are likely to contain the greatest proportion of such reactions.

The best way to do this would be to use all three complex indicators, *viz.*: reaction time, psycho-galvanic reflex and the reproduction test. A complete analysis into the ‘indicator classes’ can then be made. But it may well be that external circumstances may not permit of the application of all, or indeed of any, of these tests. In such a case we have only the *form* of the reactions to fall back on and I think it is clear that the relative proportion of complex-determined reactions will be much more clearly shown if we adopt the system of classification which I have here advocated (*viz.* separation of predicate forms into ‘outer’ and ‘inner’ and the inclusion of all the very indirect and ‘personally’ constellated reactions of my class VII—under the head of ‘inner associations’), than if we adhere to the scheme used by Jung. The proportion of inner associations to outer will then afford some measure of the subject’s ‘complexity’—if I may coin a word to denote possession of complexes.

My figures show that for normal subjects the proportion of inner to outer associations is almost precisely 1 to 2 and any proportion much greater than this is likely to mean a correspondingly large number of negatively-toned, complex-determined reactions and therefore to be significant. The most important classes from this point of view are II (*b*) and VII. Class I is somewhat significant, although much less so, and the figures for class VIII show that ‘freaks’ are very noteworthy.

I do not claim that this method is anything but very rough, only that it is likely to be less misleading than existing methods.

At the risk of prolixity and repetition I wish to emphasise the point of view indicated in the preceding paragraphs. My contention is that no system of classifying reactions can be of any value unless it is based on the nature of the psychical processes which determine those reactions rather than on the verbal or grammatical form which they may take. The different forms are only of interest in so far as they can be correlated with significant psychical conditions of one kind or another; apart from this they are merely academic and sterile.

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But we are beginning to realise with increasing clearness that affective tone is the dominant factor in all mental activity; complexes owe their power and their very existence solely to its operation; its distribution, so to speak, is the all-important determinant of the mental state of the individual. Consequently any sound scheme of classification must, in the last analysis, be based upon the affective tone concomitant to the reactions concerned and affective considerations must over-ride all others of a formal and academic nature.

Before proceeding to the interpretation of these results I wish to enlarge for a moment upon the concept of 'positive' and 'negative' affective tone which I have introduced into these studies. I do not propose to discuss them exhaustively here but I feel that it will be wise to consolidate my position and to guard against possible criticism by recalling the terms in which I defined the words¹.

It is important that the distinction drawn between the two kinds of affective tone should be a valid distinction and truly relevant to mental processes as they actually occur; also that the criterion chosen for establishing the presence of each kind of tone should be of a nature to effect such a valid discrimination.

It will be remembered that I defined negative tone as that variety which tends to repel attention, or to impede the accession to consciousness of the ideas to which it is concomitant; positive tone was defined as the opposite to this.

I think it will be conceded that the operation of negative tone, so defined, is clearly identical, in nature though not in intensity, with the process commonly known as 'repression.' The operation of positive tone is, of course, simply the reverse of this.

I identified the concomitance of these two varieties of tone as characteristic of certain classes of reaction by measuring quantitatively the effects of their operation; that is to say I actually measured the tendency for the stimulus words of the reactions concerned to have their accession to consciousness impeded—i.e. to be 'forgotten.'

Consequently, although I admitted that 'positive' and 'negative' tone might be considered as corresponding in many cases with 'pleasant' and 'unpleasant' respectively, the latter vague and unsatisfactory concepts play no part whatever in the application of my methods which are based solely on an empirical observation of the tendency for certain stimulus words to be driven from consciousness and of others to be attracted thereto.

¹ Cf. "Some Properties of Complex Indicators," p. 281.

I submit that this purely empirical procedure yields results which are strictly relevant to mental processes as actually met with and, notably, to those varieties of them which are particularly studied by psychopathologists.

After this digression we may return to the consideration of the results recorded in Tables I-V.

I may as well say at the outset that I have doubts as to whether the study of 'reaction types' based upon any system of classifying reactions is likely to prove of great practical value apart from research work. But Jung and other authorities appear to consider it important and potentially valuable and it may prove to be so for certain purposes—*e.g.* diagnosis—but only in so far as we properly understand the significance of the different forms of reaction.

Inspection of Table II shows that the reaction classes may be divided into two main groups:

- (i) Those which favour 'toned' reactions at the expense of 'un-toned.' The principal numbers of this group are classes I, II (b), II (e), III, VII and (VIII).
- (ii) Those which favour 'untuned' reactions at the expense of 'toned.' The chief examples here are II (a), II (d), IV and VI (a).

Class V is rather indeterminate and conforms so closely to the probable figures that I shall not consider it further; classes II (c), VI (b), and VI (c) are too small to afford a reliable basis for discussion.

Of the classes comprising the first group all are incontestably 'inner' associations; in the second group classes IV and VI (a) are equally undoubtedly 'outer' associations and I have given reasons for holding that classes II (a) and II (d) should also be reckoned as 'outer.'

All this is in accordance with expectation; outer reactions are obviously of a more superficial type than inner, the stimulus word does not penetrate so deeply into the mind, so to speak, because a suitable reaction is easily found. This is rather a loose way of speaking; it would perhaps be more accurate to say that the subject follows the line of least resistance and gives the reaction which combines the maximum of accessibility with the minimum of negative tone. The more accessible, the more familiar, the more superficial an idea associated with the stimulus word is, the greater the chance of 'dodging' negative tone. Or, better, the accessible and familiar associated words are just those which, by virtue of the association having been formed in countless varying contexts, possess no specific tone.

This is well borne out by the figures for the principal classes. The

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most superficial class of all is class VI (a), consisting of reactions conditioned by common phrases, antitheses, etc. Such reactions can take place with the minimum of attention to the true 'inwardness' of the stimulus word, they are as nearly as possible purely automatic. The actual number of neutral reactions in this class (160) is 132 % of the probable number (122), while the negatively toned reactions only amount to 58 % of the probable number.

Class IV (Co-existence) is less superficial, the formation of such reactions requires rather more attention although no contemplation of the attributes of the object¹ suggested by the stimulus word is necessary. The corresponding figures to those quoted above are: neutral reactions 122 %, negatively toned reactions 64 %.

Class II (a) (Simple Predicates) again demand for their formation somewhat closer attention still to the stimulus word, for the simple predicate is essentially an apprehended and named attribute. The figures here are 105 % and 91 % respectively.

Class II (d) does not conform unless it be reckoned more superficial than II (a)—which I think would be wrong—but it is so small compared to the other three that this observation is not surprising.

Similarly with the inner reactions we find that the tendency for negative tone to show itself is substantially proportional to the extent to which the reaction is personal and peculiar to the subject, or in other words to the degree of its 'innerness.'

Thus class I (Co-ordination) is comparatively superficial. The corresponding figures are, neutral reactions 89 % of the probable number, negatively toned reactions 111 %.

Class II (b) is clearly much more personal, consisting as it does of reactions containing an expression of personal opinion. The figures are 50 % and 174 % respectively.

Class VII is by definition the most intimately personal of all (cf. section 4 (c)) and accordingly we find that the figures are 30 % and 268 %.

Class II (e) is rather small and not very easy to place: in my judgment it should probably be located between I and II (b).

Class VIII is much too small to give reliable figures in this connection; inasmuch as it contains a number of reactions taken from class VII and a few 'stereotypes,' it is highly personal, but is diluted to some extent by polyverbal reactions, which although significant are

¹ N.B. Stimulus words giving rise to co-existence reactions are, of necessity, almost invariably concretes.

not quite so obviously peculiar to the individual subject as are the numbers of class VII; the corresponding figures are 36 % and 200 %.

Thus we find, as we progress from class VI (*a*), the most superficial of all, to class VII the most peculiar, the most personal, the most truly inner, a steady increase in the numbers of negatively toned reactions and a steady decrease in the number of neutrally toned. These figures are shown in Table VI.

Table VI.

Class	Actual number of reactions shown as a percentage of the probable number	
	Neutral	Negatively toned
VI (<i>a</i>)	132	58
IV	122	64
II (<i>a</i>)	105	91
I	89	111
II (<i>e</i>)	82	108
II (<i>b</i>)	50	174
VIII	30	268

I contend that this alone is sufficient justification for the system of classification which I have adopted and if it be considered with the other evidence I have adduced the soundness of this system will, I think, be unmistakably apparent.

Anyone who has done any practical surveying will know what is meant by 'closing a traverse.' I start, let us say, from point *A*, I take observations and calculate the position of point *B*, thence I work to *C*, from *C* to *D*, from *D* to *E* and finally back again to *A*. If the position of *A* thus computed coincides with its known position from which I started I conclude that the intermediate measurements and calculations have been correctly made; it is an extraordinarily delicate check, as anyone who has tried it will admit.

A somewhat similar check can be applied to the investigations embodied in this paper and the two which preceded it¹.

I started by showing that affective tone, as detected and measured by certain indicators, exerted an influence on the remembering of the words to which it was concomitant; I next used this fact as a means of differentiation between different combinations of these indicators and for determining their affective properties; finally I applied the results of this process of differentiation to the study of the relation between

¹ "Memory and Affective Tone," *This Journal* (General Section), Jan. 1921, and "Some Properties of Complex Indicators" on p. 281 of this issue of the Medical Section.

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the various types of associations and the affective tone concomitant to them.

If these methods are valid and if the tendency I have found for negatively toned reactions to predominate among inner associations and neutral reactions among outer is a real tendency, we should expect the mean 'memory value' of learned words belonging to the former class to be smaller than that of words belonging to the latter. This would constitute a 'check back' on to my starting point.

I have accordingly computed the mean memory value for inner and outer associations (classified according to the system I have been advocating); the values are 6.37 and 6.86 respectively.

Thus we see that starting from Memory, proceeding to Complex Indicators, working from these to the Forms of Associations and finally back again to Memory, the results are uniformly concordant.

When we remember the many fortuitous causes which conspire to make the memory test insensitive and the considerable scope for error which there is in classifying the forms of associations, this 'closing of the traverse' can, I think, fairly be claimed as remarkably satisfactory evidence of the reliability of the methods used and the validity of the conclusions obtained.

Finally it is necessary to consider the bearing of these conclusions as to the form of association on the practical use of the association test. I have already said that I do not think it is likely to be very great, but it cannot be doubted that the more thoroughly the test is understood by those who use it and the more perfectly the relations between its various features are appreciated, the better the results obtained are likely to be. And I believe that it may well prove a very valuable weapon for purely research purposes.

The test is sometimes used as a preliminary to psycho-analysis; the physician applies it in order to gain some idea of the general mental type of the patient and some guide to his principal complexes. He is essentially on the look out for pointers which shall tell him where he may most profitably begin the detailed exploration of the patient's mind; he wishes to shorten his labours by selecting the most promising *point de départ* for the analysis. It may be doubted whether the method is as yet fully appreciated, but some psycho-analysts value it highly.

The success of the test and the amount of information to be gained from it must necessarily depend to a large extent on the experience of the physician. It is hardly a matter which can be reduced to a rigid formula; the conclusions drawn must rather result from a gradual

process of correlating all kinds of indications given by the test with knowledge as to their import derived from various sources. The ease and certainty with which the physician can sum up his patient must be strictly limited by the extent and accuracy of this knowledge; it is all important that he should know, as precisely as possible, which indications are noteworthy and which are not.

So far as the form of the association goes there can be no doubt, in my opinion, that the most significant characteristic is the degree of idiosyncrasy of the reaction word. Stereotypes and multiverbal reactions (my class VIII) and very indirect, 'personal' associations (class VII) are the most significant of all; then come predicate forms involving an expression of personal opinion or judgment of value. Outer associations, especially those verbal forms constellated by common phrases of everyday life, are quite insignificant, though I think it probable that the true 'clang'—as opposed to the rhyme—is often a complex indicator.

In attempting to ascertain the general tendency for stimulus words to elicit emotionally toned reactions the best guide, so far as the form of associations is concerned, is probably the percentage of inner associations, the word 'inner' being defined as I have advocated above.

THE PROBLEM OF THE NEURASTHENIC PENSIONER¹.

BY MILLAIS CULPIN.

THE war neuroses have been discussed freely from all points of view, and although in some respects unanimity of opinion is not attained yet one simple conclusion has emerged—they showed no phenomena that had not been met before in cases occurring under peace conditions. Hitherto the neuroses had occupied a very small part of our professional interest; their number was comparatively small, their etiology was obscure, and their treatment accordingly little understood. The patients were difficult to handle and generally received scant attention; to diagnose a complaint as 'neurotic' led often to perfunctory placebos, to drugs the nastiness of which was presumed to have therapeutic value, or to neglect. Instruction in the subject was almost entirely lacking in the curriculum of the medical student.

This was the state of affairs when thousands of cases appeared in our armies. The subject is better known now, and indeed this branch of Medicine has received a greater stimulus through the war than has any other.

The interest aroused by acute cases during the war diverted attention from the probable results, and few of us expected a large number of men to be disabled by mental symptoms which would persist indefinitely after the war had ceased. Yet that is what is happening, and since factors are involved other than those present during the war it seems opportune to consider the subject of the neurasthenic pensioner.

I use the word *neurasthenic* in the broad sense in which it is commonly and, one may say, officially used. It embraces a heterogeneous group which it is not necessary to classify in clinical terms. In that group are, on the one hand, men with records of long and valuable service, men who have gone through the stress and horror of modern warfare to a degree which perhaps only a few can realise. On the other hand are men whose histories are a record of hospital life varied by periods spent with a unit when they performed no useful work whatever, till they were invalided out of the service with a pensionable disability; and other men who had

¹ Read before the Medical Section of the British Psychological Society, Jan. 26, 1921.

been as great a failure in civil life as they proved to be in the army. Add to these a sprinkling of men with a record of crime both within and without the service, as well as congenital psychopaths of various kinds, and you will understand that the problem of the neurasthenic pensioner—how to deal with him and what will happen to him—is no simple one.

In the recognition of the neuroses and psychoneuroses as existing in large numbers we were behind our French allies, who were already familiar with hysteria as a common disorder in a conscript army, and the ever-growing number of hysterics in our home hospitals escaped notice whilst we were fixing our interest upon shell-shock as a new disorder arising from the use of high explosives.

The writings of Roussy and Lhermitte and of Babinski were the first systematic studies of the functional nervous disorders arising from war conditions, though these writers were limited in their etiological views and seemed little influenced by their compatriot Janet—still less by the teachings of psycho-analysis. We may congratulate ourselves that in the understanding of the psychological processes involved in the production and maintenance of symptoms we are now in advance of our French colleagues.

Wonder is sometimes expressed that neuroses did not occur in previous wars. Gavin in his work on *Feigned Disorders* (published in 1843) showed familiarity with many of the symptoms of what has been called 'shell-shock,' and my own experience has taught me that during and after the South African War men received pensions for war neuroses, though the conditions were called by other and varied names.

Although I have emphasised our unpreparedness to meet the immediate problem of the war neuroses, yet a curious parallel to them is to be found in the history of that condition which used to be called 'Railway Spine.' This was for a long time regarded by many people, professional and lay, as due to organic injury, and it needed the controversial efforts of the late Furneaux Jordan and of Mr Herbert Page to demonstrate its emotional nature. A quotation will illustrate the parallel and show the insight these surgeons had obtained into the condition. Furneaux Jordan wrote in 1881:

The incidents of a railway accident contribute to form a combination of the most terrible circumstances which it is possible for the mind to conceive. The vastness of the destructive forces, the magnitude of the results, the imminent danger to the lives of numbers of human beings, and the hopelessness of escape from the danger, give rise to emotions which in themselves are quite sufficient to produce shock, or even death itself¹.

¹[Quoted] from *Railway Injuries*, p 28.

Modern warfare has enabled us to conceive more terrible circumstances than those of a railway accident, but even to the emotional aspect of modern warfare the description I have just quoted can be properly applied.

The identity of the chief factor in the two conditions being established, we need not be surprised to find all the symptoms of shell-shock described in Mr Page's book on *Railway Injuries*, which was written in 1890.

The period of amnesia after shell-shock, sometimes accepted as due to concussion, can be recognised in this description: "I have myself regarded this as a dazed condition, the result of fright, and have never thought it strange that some persons should have been unable to give any account of what transpired, or what they themselves did after a collision" (p. 70).

Scarcely a symptom of shell-shock or war neurosis escapes notice in this book; even the cardiac disturbances—the official 'Disordered Action of the Heart'—are noted. It would be waste of time to enumerate all the symptoms, but I shall find it useful to refer again to this work in dealing with some aspects of our subject.

The problems of medicine and surgery produced by the war were all to be solved by an extension of ordinary methods, whether of investigation or technique; trained men were in plenty and every well-prepared and efficient practitioner could understand and take part in the work. But although recent developments of analytical psychology had thrown much light upon mental disorders yet the application of the new ideas was far from being generally accepted, and even the diagnosis of the neuroses and psychoneuroses had been neglected in our medical training. There was in the army a disinclination to admit their existence—except as shell-shock—a disinclination fostered by the fact that when they were diagnosed the problem of the patient's disposal and treatment became a difficult one. It was far easier to treat them as organic diseases, and the medical officer who recognised the hysterical character of a supposed organic disease could do very little unless he were able to treat it himself. I became aware during the war that our hospitals contained large numbers of men suffering from hysterical conditions which were diagnosed as organic, and tried as far as possible to draw notice to the state of affairs so that 'the rot' might be stopped; but I did not foresee what would be the ultimate result of invaliding these men out of the army with a pensionable disability.

When the treatment of shell-shock became an insistent problem the function of the psychotherapist was recognised and the War Office

established centres at Maghull and Seale Hayne to which cases were sent and where medical officers were trained in psychology and psychotherapy. Some of the needs of the occasion were thus met in the middle of the Great War, but even now the Ministry of Pensions finds it necessary to train men for the treatment of pensioners. Thus we find that in this important speciality medical men have to be trained practically *ab initio* under a Government department.

The mere boarding of pensioners and the just assessment of the disability calls for special knowledge and understanding. It is, I think, only after treating on psychological lines a fair number of pensioners that one can understand the disabling nature and unconscious origin of symptoms which at first sight are fantastic and imaginary. Speaking for myself, I am aware of the great difficulty of forming a correct judgment, at a single interview, of a man's symptoms, temperament and attitude towards reality. The untrained observer often brings to bear upon the subject a breezy dogmatism which is rarely justified, and he tends to fall into several errors: to accept a functional disease as organic, to overlook that tendency of the psychoneurotic, even before a pension board, which makes him stress his bodily and say nothing about his mental troubles, and finally to regard anxiety symptoms as something that can properly be ignored. The Ministry is meeting this difficulty by the scheme of training mentioned above.

Having given this brief survey of events I now come to consider the present situation. The numbers involved cannot be statistically investigated, for many are still hidden under diagnoses which give no hint of the true condition; but I am ready to believe that about one-third of all pensioners are suffering from symptoms which, whatever the diagnosis may be, are largely neurasthenic.

Although it is still convenient to talk of a shell-shock group yet with the lapse of time the shell-shocked men become indistinguishable from those whose conditions arose from other and different presumed causes; they only differ by their symptomatology being to some extent still related to war repressions. I can produce no evidence, but I believe that the shell-shock patient tends to recover better than the man who broke down at home, even though his symptoms were at first very severe. I would make the generalisation that the amount of stress endured before break-down is a measure of the man's original stamina and hence of his likely response to treatment. The tendency to spontaneous recovery seems lacking in the men who broke down early; it is in them more particularly that we see deterioration taking place in two directions—in the develop-

ment of further symptoms and in the loss of the social sentiments as expressed in the desire for social and economic adaptation.

The history of these men is often as follows: a short period of service is followed by an illness which may be ascribed to a minor accident, exposure, the stress of training, typhoid inoculation, or any trivial cause which provides an opportunity for a neurotic flight from reality. The original symptom is an isolated physical complaint—myalgia, laryngitis, gastritis, contused back, will serve as examples—but as time passes others are added and the symptom-complex grows till the final result may be an anxiety state (veiled perhaps by the hysterical symptom) identical with that reached by the shell-shock patient. The cause of this accretion of symptoms might be profitably discussed, but at present I only draw attention to the process.

The loss of the social sentiments runs a parallel course but in the shell-shock group we are dealing with a type of man who is less likely to suffer this loss and who often succeeds, though under great difficulties, in facing the realities of life. The other type seems to deteriorate steadily, and I emphasise this deterioration because it forms a great part of our problem.

A disturbing phenomenon is the occurrence of nervous break-down among ex-soldiers at varying periods after demobilisation. It seems a paradox to ascribe this to the strain of civil life; but army life away from the front line was to some extent and for some men well-ordered and free from worry. A man's position and pay were secure, his family received their allowances and he needed to take but little thought for the morrow. Demobilised and faced by the need for initiative and personal responsibility, he takes flight from reality in a neurosis. That is one explanation, but there is another; he has passed through the stress of war and is, more or less wittingly, trying to forget it. If his repressed memories have sufficient affective content any stimulus may suffice to produce symptoms. I will describe a case of this nature.

A man of the regular army went to France in August, 1914, and was in the fighting from that time till the armistice; he reached the rank of sergeant, was mentioned in dispatches, and was always a brave soldier on whom his officers placed great reliance. Demobilised early, he bought a motor-car and set out to earn his living with it. He carried on for a time and then began to be afraid of an accident; this nervousness increased till he had to give up driving and finally he sold the car and had to live, with his wife and child, partly on the charity of his father. In October, 1919, a neighbour sent him to me to see if I could help him.

He then had a 'hysterical' limp, was full of strange fears, afraid to come alone to my house at night, and in his own words "scarcely knew what he was doing." His wife described fugues which the man himself hardly remembered.

I could not undertake the whole treatment of the case and as the wife was an intelligent woman I tried an experiment. In her presence the man quickly went into a hypnoidal state in which he abreacted part of his experience, and she undertook to carry on the same treatment at home. She succeeded very well and between them they recovered a great part of the repressed material with appropriate abreaction; it included apparently every emotional incident that had occurred during over four years of fighting. At intervals he came to me and I recovered memories which had defeated the wife. He is now free from distressing symptoms and is at work, but has regressed so that he has a feeling of dependence, has little initiative and has a curious habit of going to haunts of his boyhood and sitting there in meditation. I spent about twenty hours upon the case, even with the useful and time-saving help of his wife, and mention this to show one practical difficulty in treatment—that is, the time involved.

In this case there was no doubt concerning the main factor in the production of the psychoneurosis—the War. The case also suggests that when break-down occurs after demobilisation a superficial interrogation about a man's war experiences may enable one to judge how far war repression is responsible for the symptoms. A positive result may be very striking, something approaching to an abreaction being produced quite readily.

When we consider the difficulties inherent in the treatment of the psychoneurotic patient of civil life—the evasions and rationalisations, the wilfulness and conscious resistances, as well as the influence of friends and relatives—we are prepared to meet similar difficulties with the neurasthenic pensioner; and they are not lacking.

It is hardly necessary to say that treatment must be directed by psychological principles, and whoever has seen a strong abreaction on the revival of a war memory can have no doubt concerning the importance of the mental processes involved and the need for treatment along the lines indicated. But the patient must be willing to go through a process which is extremely unpleasant and even painful; hence often arises a clinical difficulty when a man bluntly refuses to take his share in the work.

Here I will note a curious observation:—if you meet a patient who

has been treated by abreaction or by the discussion of his war experiences and ask him how he was treated he will hardly ever tell you that he was made to talk about the war, but will give all kinds of evasive answers. In fact, the tendency to repress again is almost constantly present. Some explanation appears necessary in regard to the position of psycho-analysis in this connection; abreaction and a re-arrangement of the man's attitude to his symptoms and to life generally are not psycho-analysis, though they depend upon psycho-analytical technique and are based upon the theory of the unconscious. I believe that very few war cases have been psycho-analysed in the sense in which that word is used by competent psycho-analysts, though in many cases the mental exploration has to be carried past the war material.

But it is not my intention to discuss methods of treatment except to point out how necessary are the goodwill and active assistance of the patient and that in this respect the psychotherapist in a military hospital, especially after the armistice, was in a more favourable position than is he whose duty it is to treat pensioners.

Not only were the men more under control but resistances tended to disappear by the example of successful results; moreover, the prospect of discharge on a cure taking place led to the same end. This last factor sometimes acted detrimentally, for the hiding of symptoms in response to a stimulus is not equivalent to their removal by analytic means.

A large proportion of pensioners are willing subjects, especially, in my opinion, those with a low assessment, for their effective disability is often low on account of their efforts towards recovery, though their symptoms may be really serious and distressing.

But in many, especially those with a history of early break-down, good results are more difficult to obtain for there is obviously a more powerful neurotic tendency to deal with. In some it becomes clear that the neurosis has mastered the situation; the pensioner is practically at liberty to refuse treatment and often does. Or he may clamour for it and the remorseless urge of the neurosis uses the opportunity for its own ends; the man presents himself insistent upon his desire to be cured and yet opposes the process of cure at every turn; then the failure of treatment further strengthens the neurosis. The cult of the rest-cure and of massage and electricity as standard treatment for 'nerves' has now reached all classes of the community, and in the absolute passivity required of the patient they appeal particularly to the man who wishes to demonstrate his desire for treatment.

There are others more unfavourable still who were ne'er-do-wells and

failures before they enlisted. I was familiar with one type in the army; he would join up and be quickly discovered to be useless, be discharged as 'unlikely to become an efficient soldier,' and almost as quickly enlist again. In one case four enlistments from the outbreak of war up to March, 1916, had each resulted in the man being invalided out of the service. I have no doubt that his disability is now fairly high.

But even in men who now have the appearance of the ne'er-do-well we find some who have good records and respond to treatment. It is sometimes almost impossible to believe that a man who looks as if he has never been anything more than a querulous loafer should once have been a good citizen and a brave soldier; yet I have seen a few such men—only a few—restored to decent citizenship.

This deterioration of a good soldier is so hard to believe when we see the man at his worst that I will quote some fragments from a description of a case by Mr Page:

A tall powerful man was in a very severe and destructive collision. He received a few bruises and fractured the bones of his nose; he was not stunned. A friend beside him was killed; this seemed to prey constantly upon his mind. He lay for several days in a state of great depression.

Nine weeks later he was in a most feeble and wretched state. His mental condition showed extreme emotional disturbance. (Here hysterical symptoms are described.)

Four years after the accident, long after his claim for compensation had been settled, his medical attendant writes: His appearance is much altered: his voice is weak, almost gone at times; very depressed spirits, palpitation, loss of sleep, bad dreams, very easily tired, can't walk more than two miles. Has lost all his energy. Great dread of impending evil. Can't drive without feeling frightened all the time. (This description closely fits the symptoms of many neurasthenic pensioners.)

His doctor adds, "I knew him well before the accident, and he was a very energetic and very honourable man."

Three years later, i.e. seven years after the accident, his symptoms were still subsiding. Since he began regular work he had continued more markedly to improve.

This account may enable us to appreciate the real deterioration that may follow shell-shock and to picture the probable original condition of some of our socially useless pensioners.

There are one or two types that give trouble in particular directions. Pathological irritability is a very real trouble, of which a man may complain whilst recognising its inadequacy. In some of those cases where shell-shock is pleaded in extenuation of crimes of violence I believe the plea is well-founded though I express no opinion as to how far it should be judicially recognised.

The pathological confabulator is to be reckoned with, and many complaints concerning treatment arise from such men. I give one

example, in my book on the psychoneuroses, of a joint confabulation, almost delusional, which affected several men. In another case a young man of good family caused great distress to his father (a very old friend of mine) by a heart-rending account of maltreatment and starvation in a hospital to which I was attached and which was managed upon the kindest and most efficient lines.

So much for the problem as it concerns the individual patient: now I come to what I call the pension dilemma. We have no concern as clinicians with the rights or wrongs of pensioners, but we have to consider the relation of the pension to the maintenance of symptoms, a relation which does not exist in regard to organic conditions.

One frequently hears the word 'pensionitis,' coupled with the suggestion that to reduce or stop a neurasthenic's pension will aid in his recovery. In considering this point we may divide the symptoms into two groups: one the direct result of the repression of war experiences such as could be removed by abreaction, and it is difficult to see how a pension could affect them in either direction, though one must admit that even such symptoms may disappear, temporarily at least, under strong stimuli.

In the other group are those symptoms which are an expression of the inability to face present reality; this is difficult ground indeed, for we know that the supposedly healthy man feels the curse of Adam and even if he has the urging of creative or other socially useful impulse he tends to avoid the unpleasant and seek the pleasant task. Some stimulus is needed for him to face the unpleasant, and how much more necessary is a stimulus to the neurasthenic. This was seen in practice in special war hospitals, where good results often followed a gentle intimation that proof of ability to work was a preliminary to discharge.

So far, then, as a pension removes the need for work it may be harmful; but except in cases of severity the amount of the pension is not sufficient to remove the need for work, though it may serve as a strengthening of the plea, or a feeling of, unfitness.

I will put the question plainly. Are there many cases in which the stopping of a pension would in itself lead to recovery? The answer, in my opinion, is No. (From this discussion I exclude malingerers, or the conscious simulation of disease for a definite end; though I am aware that the pensioner, neurasthenic or not, is no more free than other people from the promptings of a conscious self interest.) In so far as the neurosis is a flight from reality, the pension aids in the flight; but that is not to say that the pension maintains the disease. If it were possible to place certain men in such an environment that there would be no gain

from the neurosis but everything to gain from recovery, then treatment, otherwise ineffectual, might succeed; but to stop a pension does not give us this possibility.

Yet there are, I believe, some cases, chiefly those showing a certain type of hysteria, in which the cessation of the pension would remove the symptom. They are few, and few psychotherapists would like to diagnose them.

In regard to railway injuries it is now a truism of the text-books that when the claim is settled the patient often makes a speedy recovery, though this is not invariable as the case of Mr Page's, quoted previously, illustrates. At one time the plan of giving gratuities was tried with men suffering from shell-shock but proved a complete failure and has been abandoned for two or three years; the men returned later with their symptoms unchanged or, to speak more correctly, unimproved. I saw two such cases where the men had re-enlisted. One, who proved a most satisfactory patient, had re-enlisted as a last resort when he had spent his gratuity and found himself unable to work and support his family: the other, when I questioned him as to his reasons for re-enlisting when he knew he was unfit, answered: "Well, the army made me like this and I reckoned it was their job to cure me."

In both cases the usual war repressions were found and unaided recovery was hardly to be expected.

There exists a definite state of mind which the French call *la psychose de revendication* and the Germans *die Rentengier*. It is not merely a desire to obtain a pension but its predominant affect is rather a sense of irreparable injury at the hand of society, for which the fullest compensation can never suffice. Dr Karl Abraham of Berlin regards it as favoured by state pension but only possible in those patients who already had a tendency to react in a narcissistic manner to assaults upon their self-feeling. Roussy and Lhermitte also dwell upon the importance of the previous temperament of the man.

One meets with this *Rentengier* sometimes in association with a pathological irritability which is not recognised by the patient. It occurs most often and most significantly in men who broke down early and shows itself in such phrases as "I was an A1 man when I joined the army and look at me now, and I know I shall never get any better," together with an aggrieved and truculent manner. I regard the condition as pathological, and in some cases the question of paranoia has arisen.

Quite different is that frank statement often heard from a reasonable man, who has helped in his own treatment, that he is afraid for the future or even finds his present troubles are hindering his recovery.

When we consider the influence that a current trouble has in provoking

nervous break-down in civil life we must admit that the war neurasthenic is adversely influenced by his difficulties, whether financial or domestic. However much effort he makes he finds adjustment no easy matter and in many cases gives way to the strain. He finds extra difficulty in obtaining employment, for his disability affects him more disadvantageously than a bodily injury. The employer knows where he stands, for example, in regard to a one-armed man and can estimate precisely what are his capabilities. But we must realise that the neurasthenics are peculiarly unreliable; in some of them the deterioration has affected their social sense to such an extent that they are definitely dishonest and I must confess that I have often looked at a patient and thought that I should not care to employ him myself. One frequently hears the complaint that an old employer has found it impossible to reinstate the man, and one agrees that this action was inevitable.

I know an ex-officer who before the war held a responsible position abroad at £500 a year; he did good war service before a severe break-down, which came on after the armistice, but the medical officer of his old firm refuses to pass him as fit to go abroad again—and I think he is right; the Ministry has provided him with proper treatment, the alternative pension scheme has been to his advantage, and he receives a grant for his children's education. But he is now a clerk at £3. 10s. a week and the housing trouble makes him keep his family in the country whilst he lives in uncongenial lodgings in London. One can appreciate the effort necessary for the man to find his way back to health under these conditions, though he had enough stamina to take him through three years of campaigning and is now keen on doing the best for himself and his family.

We have to face the fact that economic conditions at the present moment, affecting as they do the well-being of the whole country, more particularly affect the neurasthenic pensioner. He is in the vicious circle of economic stress and his own disability; each reacts upon the other and increases its evil effect. Thus the man is led to rely more and more upon his pension.

We can now sum up the chief elements in the problem:

1. The deterioration that takes place in the power of the pensioner to face the realities of life.
2. The administrative loss of control over the individual, whose outlook may be distorted and whose neurosis is master of the situation.
3. The need for a pension and at the same time the need for a stimulus to recovery.
4. The special difficulty of the pensioner in facing the economic struggle.

PSYCHOLOGY AND THE UNCONSCIOUS¹.

By T. W. MITCHELL.

IN psychology, as in every-day speech, the terms conscious and unconscious, consciousness and unconsciousness, are often used ambiguously. To be conscious implies, or ought to imply, present awareness; and consciousness should refer only to the 'field of consciousness' at any moment. But very often consciousness is used as a collective concept to denote the totality of mental processes, and by the older psychologists it was commonly used as the antithesis of 'matter,' very much as we now use the word 'mind.'

Even up to the present time some people think that consciousness and mind are synonymous terms. There are two senses in which this opinion may be held. It has been maintained by some writers that only what is in the field of consciousness at any present moment is truly mental, and that when a presentation passes out of the field of consciousness it passes literally 'out of mind.' By these writers the problem of mental retention is solved by supposing that the 'memory-traces,' whose existence we must assume in order to account for conscious recollection, persist in the form of 'brain-traces' which have no mental counterpart until they are again roused to functional activity accompanied by consciousness.

On the other hand, when consciousness is used to include the whole mass of psychical manifestations, the totality of the mental processes of the individual, it is implied that there is much in the mind that is not in the conscious field of the moment, but nothing which is not now, or has not at some time been, in consciousness in this strict sense of the word. On this view memory-traces exist as mental traces or dispositions, and in their latent state as well as in their active state form part of the mind.

In these two senses, then, it has been held that consciousness and mind are equivalent. The former view is very commonly held by physiologists. The latter is that which has been held by the majority of psychologists up to recent times.

When those who believe that the passing wave of consciousness

¹ Read before the Medical Section of the British Psychological Society, Dec. 22, 1920.

alone is truly mental speak of an idea becoming unconscious, they mean that it has no longer any existence except in the form of some physical trace left in the *brain*. And the brain, as material substance, is unconscious in the same sense as inanimate objects are said to be unconscious. If, however, we believe that when an idea passes out of the conscious field it leaves behind a trace or disposition in the *mind*, the total sum of such mental dispositions, so long as they are latent, may be said to form an unconscious part of the mind. And this is a use of the word unconscious which is very commonly made.

So long as cerebral traces or mental dispositions give no evidence of activity it may be convenient to speak of them as unconscious, if we suppose that so soon as they become active they will manifest in consciousness again. But when evidence is found of the occurrence of mental activity which does not appear in consciousness and cannot be discerned on introspection, the inadequacy of this distinction between conscious and unconscious becomes apparent. The static physical view of unconsciousness—the hypothesis of brain-traces, has to be supplemented by some sort of ‘unconscious cerebration’ which is capable of doing mental work without any mental accompaniment; and, in the alternative hypothesis, the mental dispositions must be accredited with activity and consciousness in some degree, though not in a degree sufficient to attract the attention and be discerned on introspection. This latter supposition is the hypothesis of *subconsciousness* as this was first formulated by writers on general psychology.

We know that the field of consciousness has always a focus which is the centre of attention, and that outside this focus there is a margin in which discrimination becomes less and less exact as we recede from the focus; and the principle of continuity compels us to believe that beyond the margin, also, something of the nature of consciousness exists. This possibility is commonly described in terms of a psycho-physical threshold which can be overstepped only by such feelings or thoughts as attain a certain degree of intensity; and such thoughts or feelings as do not attain the necessary intensity are described as subconscious.

The need for postulating any subconsciousness beyond the margin discernible on introspection was not very keenly felt by psychologists so long as they confined themselves to the study of the normal mind; but when such facts as those revealed in Janet’s investigations of hysteria came to light, it became urgently necessary to find some term by which to describe them. The dissociated sensations and movements of hysteria were called subconscious by Janet, and it was very commonly

supposed that the subconsciousness of such hysterical manifestations was the same kind of subconsciousness as that which has been postulated by some psychologists as existing in every normal mind. Yet Janet himself has clearly shown that the hysteric's failure to perceive sensory impressions applied to an anaesthetic area is not due to lack of intensity of the modifications of consciousness so produced, but to a dissociation whereby these modifications fail to be assimilated to the 'personal consciousness.' For it is obvious, in his experiments, that there was some sort of awareness of the impressions which was not dim or confused, but was clear and discriminative. The most striking feature of this awareness is that it was an awareness concomitant, though not com-present, with the awareness of impressions received through other sense-organs which were not anaesthetic. There was a kind of consciousness which is best described by Dr Morton Prince's term 'co-consciousness.'

The implication of diminished intensity contained in the term subconscious makes the use of this word inadvisable when we wish to refer to such mental activities as those revealed in hysteria and multiple personality. Moreover, by using Dr Morton Prince's term 'co-conscious,' we emphasise the important fact that in these dissociations we have an actual splitting of *consciousness*, not merely a splitting of the mind. For we may have dissociation of the mind in which the split-off portion shows no evidence of being accompanied by awareness, and seems to be truly unconscious.

It would thus seem useful to have some other term to describe all that exists or takes place below the threshold of consciousness, whether it be subconscious or co-conscious or unconscious. The word 'subliminal' was used by Frederic Myers just in this way, and it would perhaps be convenient if we could still use it in the sense defined by him. He said: "The idea of a *threshold* (*limen*, *Schwelle*), of consciousness;—of a level above which sensation or thought must rise before it can enter into our conscious life;—is a simple and familiar one. The word *subliminal*—meaning 'beneath that threshold,'—has already been used to define those sensations which are too feeble to be individually recognised. I propose to extend the meaning of the term, so as to make it cover *all* that takes place beneath the ordinary threshold, or say, if preferred, outside the ordinary margin of consciousness;—not only those faint stimulations whose very faintness keeps them submerged, but much else which psychology as yet scarcely recognises; sensations, thoughts, emotions, which may be strong, definite and independent, but which by the original constitution of our being, seldom emerge into

that supraliminal current of consciousness which we habitually identify with ourselves¹."

It may be seen that the ambiguity, already referred to, pertaining to the use of the word consciousness, follows us here if we try to be clear about the *locus* of the threshold. In the first part of Myers' definition he is obviously referring to a threshold which lies between what is in consciousness and what is out of consciousness at the moment; but in the latter part the threshold seems to separate that part of the mind which is capable of becoming conscious from a part which ordinarily has no such power. It is a threshold between the self that each of us knows by introspection, and a hidden self of which we have no direct cognisance.

Between what is conscious at the moment and what is unconscious or subliminal at the moment there is a clear distinction, and it would seem to be urgently necessary to distinguish also between that part of the subliminal which is capable of entering consciousness and the part which is not capable of doing so. Such a distinction has been drawn by Freud. That part of the mind which is out of consciousness at the moment, but is capable of entering into it—the memories of every kind which we have at our disposal—he calls the *Preconscious*. That part of the mind which is out of consciousness at the moment and is incapable of entering into it under any ordinary circumstances, he calls the *Unconscious* 'proper.' Preconscious ideas are latent because for the time being their activity is slight; they are too feeble to step over the threshold of consciousness. But, when they become strong, they overstep the threshold and enter the conscious field. Freud maintains, however, that some ideas, namely, those that are repressed, cannot enter into consciousness, no matter how strong and active they may be. Such ideas he calls Unconscious in the technical sense of the word.

It is perhaps unfortunate that Freud uses the word unconscious both in the descriptive sense of being out of consciousness at the moment, thereby making it include the preconscious, and also in the particular technical sense of the Unconscious proper—the unconscious constituted by repression. This double usage tends to set up a confusion similar to that which accrued from the old custom of using the word consciousness so as to include within it what we now call the preconscious, as well as what we may call the conscious 'proper.' Nevertheless Freud's division of mental contents into conscious, preconscious and unconscious makes for clearness and precision when we attempt to give a regional or topographical description of the structure of the mind.

¹ *Human Personality*, Vol. I. p. 14.

It is not, however, in a descriptive sense only that Freud employs these terms. He uses them also in a 'systematic' sense which is even more significant for his psychological theories. He conceives of the mind as a reflex system—a mental reflex arc—sensory or receptive at one end, and motor or executive at the other. Any stimulus applied at the receptive end sets up a movement which tends to spread to the motor end. The setting up of this movement, the initiation of any mental process, is accompanied by release of psychical energy, the accumulation of which is experienced as discomfort; and the goal of the activity set up is to effect the discharge of this energy and thereby to bring the system to a condition of rest again. The state of excitation, which is experienced as discomfort, is thus changed to a state of relief which is experienced as pleasure, and the tendency within the mind to effect this change is what Freud calls a 'wish.' The chief characteristic of such a mental system is the freedom with which it permits the psychical impulse to spread through all its parts in search, as it were, for some outlet for the discharge. When this is achieved, pleasure is experienced, so that the purpose of the movement may be said to be the pursuit of pleasure; the system is actuated by what Freud calls the 'pleasure-principle.'

At first the tendency of a movement set up within the system is to regress to the sensory end of the mental arc, thereby affording hallucinatory gratification through revival of the sensations which had accompanied previous gratifications. But very soon this is found to be unsuitable to the demands of the 'real' world, and a secondary mental system arises, or comes into action, which secures the inhibition of the tendency to regression, and directs the impulses towards the motor end of the mental arc so as to bring about, by action upon the external world, the changes necessary for the production of a real gratification instead of an imaginary one. The activity of this secondary system is guided by what Freud calls the 'reality-principle' in contradistinction to the pleasure-principle underlying the activities of the primary system.

The secondary system does but control and guide the energies of the primary system so as to secure more adequately the gratifications which the primary system strives for, but achieves only imperfectly because of its want of conformity to reality. So long as they are in agreement as to what is pleasant and what is unpleasant they work harmoniously together. But a time comes when disagreement sets in. With the development of the child's personality it comes to pass that what causes pleasure in the primary system causes pain in the secondary

system. The task of the secondary system here is no longer to control and guide the tendencies of the primary system towards a real fulfilment of its wishes. The wishes of the two systems are not now the same. The tendencies which give pleasure to the primary system give pain to the secondary system, and the secondary system tries only to avoid these tendencies and get away from them. Thus arises a divorce between the two systems which results in the establishment of the mechanism of repression, and the formation of the two mental systems which we call the unconscious and the preconscious.

The primary and secondary systems are thus the fore-runners of the unconscious and the preconscious. The unconscious retains all the characteristics of the primary system. It is guided solely by the pleasure principle; it can do nothing but wish, and in the pursuit of the gratification of its wishes the freest possible movement of the psychic impulse is permitted, just as in the primary system. And just as the secondary system does not always succeed in mastering the tendency to regression, so the preconscious is ever at war with the unconscious, and sometimes becomes subject to its domination. It is the conflict between them which gives rise to the mechanism of repression, and the earliest repressions thus brought about form the core of the unconscious throughout life.

The whole of the content of the mind would seem to be divided by Freud into that which, in the systematic sense, is preconscious and that which is unconscious. The content of consciousness is really part of the preconscious system. Consciousness itself he compares to a sense-organ which perceives certain processes set up in the preconscious. Some of Freud's disciples seem to suppose that Freud was the first to make the comparison of consciousness to a sense-organ, but it is really a very old notion in psychology. A very similar view may be found in the writings of the Scottish school of philosophers and of their French followers at the beginning of the nineteenth century. Royer Collard, for example, held that "our sensations, acts, thoughts, pass before our consciousness as the waters of a river under the eye of a spectator on its banks." Consciousness has also been compared to a stage on which plays are acted, but this simile would apply better to that part of the preconscious of which consciousness is the spectator.

Whether or not the comparison of consciousness to a sense-organ is legitimate, it is useful in that it emphasises the fact that neither the contents nor the processes of consciousness have any peculiar characteristics other than those that belong to the preconscious. The preconscious contents are just those that are qualified to enter consciousness.

and conscious process and preconscious process have been one from the beginning. On the other hand, the contents of the unconscious are just those contents of the mind which are disqualified from entering consciousness in undisguised form, and unconscious process has been different from preconscious process from the beginning.

Freud does not often use the metaphor of a threshold in delimiting the different regions of the mind, but just as we speak of a threshold between the conscious and the preconscious, so we may say there is a threshold between the preconscious and the unconscious, but this threshold has a barrier. The doorway here is not freely open to every idea that is strong enough to overstep the threshold. There appears to be a doorkeeper—the Freudian ‘censor’—who discriminates between the applicants, and selects those that may be admitted into the preconscious. The censor has behind him all the repressing forces which keep out of the preconscious those ideas that would be unbearable if they became conscious.

The unconscious due to repression is the true Unconscious of Freudian psychology. It is that part of the mind which retains the characteristics of the primary system, is guided by the pleasure principle and is under repression. The preconscious is that part of the mind which retains the characteristics of the secondary system, is guided by the reality principle, and is the source of the repressing forces.

This is the systematic meaning of the term unconscious which, in its descriptive meaning of being merely ‘out of consciousness’ includes the preconscious. To say that a thought or mental process is unconscious should, in psycho-analytic writings, be held to imply that it belongs to that mental system whose mode of functioning corresponds to what Freud calls the primary process; but it cannot be said that authors have adhered to this usage, or that the context always makes it clear when it is used in the descriptive and when in the systematic sense.

A further source of confusion is found in the fact that certain preconscious contents which form associative connections with unconscious contents are subject to repressing forces; their emergence into consciousness is met with resistance, and they are therefore, in the systematic sense, unconscious. Freud provides for them a second censor which he places between the conscious and the preconscious.

Freud’s explanation of the origin of the Unconscious accords well with the nature of its contents and processes which he discovered by the technical methods of Psycho-Analysis. We are prepared to find that the Unconscious consists essentially of just those tendencies or

wishes whose satisfaction gives pleasure to the child, but are reprehensible or painful to the adult. And this is indeed the teaching of Psycho-Analysis. The Unconscious is just the infantile mind, persisting throughout life, covered over, as it were, by the adult mind which has developed in response to the claims of reality. Moreover, this infantile part of the mind is not wholly derived from the childhood of the individual; it is partly derived from the childhood of the race. And some of the tendencies derived from this latter source have never entered consciousness at all, but have been under repression from the beginning. Of the same nature are the emotional reactions which arise when the change in the affective values of the primitive tendencies supervenes. We must believe that the readiness so to react is an inherited function of the preconscious, and that its emergence in the child is part of the recapitulation of racial history and marks the period of man's transition from the brute to the human.

If all psychologists accepted Freud's conclusions as to the origin and nature of the unconscious there would be little room for ambiguity in the terms used to delimit the different regions of the mind. Indeed, if all those who more or less consistently use his technical methods and base their conceptions on the results of mental analysis, could have adhered to his nomenclature so far as it served their purpose, we should have been saved some of the difficulties which beset our path when we try to correlate the findings of the different schools.

The Zürich school of Analytical Psychology founded by Jung is an offshoot from the psycho-analytic school of Freud; but, as is well known, Jung has in recent years diverged in several directions from the psycho-analytic stand-point. One of the most important of these divergences concerns the nature and origin of the unconscious.

Jung defines the unconscious as "the totality of all psychic phenomena that lack the quality of consciousness." He says that instead of being called unconscious, these phenomena may equally well be called subliminal—a term which, in his view, presupposes the hypothesis that each psychic content must possess a certain energetic value in order that it may become conscious. Such an admission would seem to imply that, in Jung's view, every content of the unconscious is unconscious because it has not sufficient energetic value or intensity to overstep the threshold. This would exclude the whole of the true unconscious of Freud, because an essential characteristic of a psychic content that is unconscious in the 'proper' Freudian sense, is that it cannot enter consciousness simply in virtue of its strength or activity. Yet Jung

believes that, in addition to all lost memories, and the subliminal associations and combinations of these that may occur, an important part of the unconscious results from 'intentional repression' of painful and incompatible thoughts and feelings.

It is doubtful how far the results of intentional repression correspond with those due to the repressing forces which come into play without any conscious intention; and this latter form of repression is of prime importance in the formation of the Unconscious of Freud. However this may be, Jung explicitly states that the 'personal' unconscious contains intentional repressions as well as all lost memories and the subliminal combinations they may form.

He calls these contents of the unconscious 'personal' because they are all derived from experience in the individual life, and are unique in every person. But he postulates another stratum or form of the unconscious which is not the product of experience during the individual life, but is inherited or innate. It contains the psychic potentialities which are common to every individual, such as the instincts and the congenital conditions of intuition—the 'archetypes of apprehension,' as he calls them. The sum of these inherited psychic potentialities he calls the 'Collective Unconscious,' because they are common to all men, and not unique individual contents like those which form the personal unconscious.

The collective unconscious is the part or form of the unconscious on which Jung now lays most stress. Here are to be found the instincts which we all have in common. Here also are those primordial forms of thought and feeling which determine the uniformity of our apprehension of the world and form the basis of intuition. They are the source of all the myths and legends and religions of humanity, whose similarity amongst all peoples and in all ages is accounted for by their common origin in the collective unconscious of the race. In normal life they come to light in more or less disguised form in dreams; in the neuroses they press obtrusively upon the conscious personality, making difficult that adaptation to reality which is man's chief task; in the insanities they break through the accretions of ages of culture and civilisation, and manifest in their primordial forms.

In primitive man, according to Jung, when personal differentiation is only beginning, "his mental function is essentially collective. He is more or less identified with the collective psyche, and therefore without any personal responsibility or inner conflict; his virtues and vices are collective. Conflict only begins when a conscious personal development

of the mind has already started....The repression of the collective psyche, in so far as it was conscious, was a necessity for the development of the personality, because collective psychology and personal psychology are, in a certain sense, irreconcilable....A collective point of view, although it may be necessary, is always dangerous for the individual."

It is interesting to compare the factors in this repression of the collective unconscious with those involved in the repression of the primitive impulses as described by Freud. The opposition between society and the individual is present in both; but the collective is repressed because it is dangerous to the development of the individual; the primitive impulses are repressed because they are dangerous to the development of society. Repression of the collective is a reaction of the individual against the encroachments of the social consciousness; repression of the impulses is due to a reaction of the social consciousness against the egocentric tendencies of the individual.

In Freud's psychology, the two great subdivisions of the mind are the preconscious and the Unconscious. In the psychology of Jung a similar importance is ascribed to what is personal and what is impersonal or collective. It is evident that the different bases of classification employed by Freud and Jung lead to cross-divisions, so that it is difficult to be sure in what division of the one classification any particular content in the other should be placed. The true Unconscious of Freud would seem to correspond in many respects with the impersonal or collective unconscious of Jung; for the primitive impulses, which form the core of the Freudian Unconscious, and the primary process which it retains as its mode of functioning, must be deemed to have universal validity since they are common to all mankind. In so far, however, as the primitive impulses acquire individual differentiation in infancy, they must be regarded as pertaining to the personal unconscious. But in the true Unconscious of Freud, as in the collective unconscious of Jung, is to be sought the origin of unconscious phantasies, of the language of the dream, and of the myths and legends of humanity.

Such, in barest outline, are the two main conceptions of the nature and content of the unconscious which hold the field in psychopathology at the present time; and I would like to make a few brief comments, (1) on the relation of these views, one to the other, (2) on their relation to certain problems of psychopathology, and (3) on their relation to the science of Psychology as a whole.

Although at first sight there may not seem to be any serious incompatibility between the two views, yet we know they form the founda-

tions on which have been built up two systems of psychopathology and psychotherapeutics which, although they had a common origin, have diverged so much that they seem to be pointing in opposite directions. The differences between the two schools cannot be said to be wholly due to differences about the nature of the unconscious; but some of them are directly dependent upon these, and only in so far as we may find common ground between the two views of the unconscious can we expect to find any common outlook on therapeutic problems and aims.

Jung appears to have discarded Freud's distinction between the preconscious and the unconscious; and this is all the more unfortunate in that he includes so many different kinds of content in the unconscious. At one time he speaks as if the personal unconscious consisted solely of repressed materials of a personal nature; at another time he tells us that in the personal unconscious are to be found all the lost memories as well as intentional repressions of painful and incompatible thoughts and feelings. If we may judge, however, by accounts of analyses conducted by Jung and his pupils, the personal unconscious would seem to have comparatively little importance ascribed to it. The 'undifferentiated co-function' and the myth themes revealed in dream and phantasy seem to be the main objects of interest. The discovery and the adjustment of the individual's relation to the collective unconscious seem to have taken the place of the patient following out of the bypaths into which the *Libido* has strayed which we associate with Psycho-Analysis.

The undifferentiated co-function is sometimes said to be unconscious because it has been neglected, sometimes merely because it is undifferentiated, and sometimes because it is repressed. If it has merely been neglected, all that should be necessary to restore it to consciousness would be to direct the attention to it. There seems no reason why its restoration should be accompanied by resistance. On the other hand, if it is under repression, we ought to know what is the nature of the repressing forces, and what is the principle to which they conform. Are we supposed to be dealing with the pleasure-pain principle concerned in Freudian repression, or are there other grounds for repression and resistance? The lack of clear indications on this point may be due to the slight emphasis which Jung now seems to put upon repression, but when repression is absent, resistance in analysis should be absent also, unless some reason for resistance, other than repression, can be given.

An interesting feature of the work of the Swiss school is the way they deal with the myth themes and the symbolism of dreams. They seem to deny the need for a reductive interpretation of these psychic

formations, and they lay so much stress on the importance of their anagogic interpretation that they seem to regard the appearance of a myth theme in dreams as affording an infallible indication of the life-line that the patient must follow if he is to escape from his neurosis.

The potentiality of human imagination which enables each individual to generate within his mind the great primordial images, is a problem of great interest to genetic psychology. Jung seems to guard himself against the implication—inherent in much of his writing—that the primordial images are themselves inherited, and asserts only that the potentiality for the formation of such images is part of the innate endowment of the mind. The need for this caution seems based on a belief that bodily inheritance is in some way more real and more explicable than mental inheritance, but it is doubtful if there are any good grounds for such a belief. For just as in the unfolding of the bodily organs from the material germ we find the recapitulation of our ancestry revealed by such archaic remnants as the gill-slits and the swim-bladder, so in the unfolding of the mind we find a stage or level in which the primordial images reappear in their original form. And so, not only is the capacity for myth and symbol formation innate in the mind, but the very symbols and myths themselves, which our forefathers formed, are there also from the beginning. Dr Ernest Jones believes that they are produced anew by each individual, in virtue of the uniformity of the ways in which the human mind reacts to those primordial interests on which myth and symbol are founded, but Freud, if I understand him aright, is inclined in this matter to adopt a view very similar to that of Jung, and to believe that these archaic products of human imagination are there, in each individual mind, from the beginning.

The Freudian view of the Unconscious is more definite and precise than that of the Swiss school. It is just the infantile mind, still subject to the primary process, and still striving for the gratification of the primitive impulses. Complicating this simplicity, however, is the fact that preconscious contents may fall under the sway of unconscious wishes, and, being thereby charged with the affective tone of the Unconscious, become subject to a censorship which prevents their emergence into consciousness. Notwithstanding this possibility and its far-reaching consequences, we may still feel it hard to believe that everything in the mind that cannot enter consciousness is under direct or indirect repression. This difficulty is especially acute when we consider the creative side of mental activity. We get here the impression—conforming to Jung's view—that some things do not enter into consciousness

because they are not yet ripe or ready to do so. Presumably such ideas belong to the preconscious system, and their non-emergence into consciousness is due to a lack of the intensity necessary to enable them to cross the threshold. But when we survey the whole field of man's mental activity, and take cognisance of those of its products which show signs of subliminal incubation, we may sometimes be in doubt concerning the regional localisation of processes which, in the descriptive, if not in the systematic sense, are unconscious.

This difficulty of fitting into the analytic frame-work certain facts of observation is met with also in the field of abnormal psychology. In pre-analytic days, the hypothesis of mental dissociation was our most widely useful concept in the study of abnormal states. From the beginning, Freud tacitly accepted the fact of dissociation, and seemed to imply that only in the explanation of how it is brought about did he differ from Janet's views on this matter. Substituting certain dynamic forces for Janet's *misère psychologique* he left us to suppose that every form of dissociation could be ascribed to mental conflict and repression. But when we consider such a form of dissociation as, for example, a hysterical paralysis of the arm, we see that on Janet's hypothesis the ideas and feelings related to the use of the arm have become dissociated from the personal consciousness. According to Freud, however, dissociation in such a case bears primarily on a totally different system of ideas. It bears on some wish, which, after being dissociated as a result of mental conflict and repression, becomes converted into this particular physical disability. But the motor disability is itself a dissociation as Janet has shown, and it is not a dissociation directly due to conflict and repression. It is due to an 'adaptation for conversion' which, apart from the bare statement of its occurrence, Freudian doctrine has done nothing to explain.

Hypnotic dissociation, and the dissociation of somnambulism and of multiple personality, present difficulties of another kind. Here it may be supposed that dissociation in mass of all the thoughts, feelings and actions related to some painful experience, or to one side of one's character, may be due to conflict and repression; but the subsequent behaviour of the 'secondary state' or secondary personality does not seem to conform to any of the mechanisms described by the psycho-analysts.

Again, as I have frequently pointed out, analytic doctrine takes no account of the problem of co-consciousness—indeed the very existence of such a problem is denied by Freud. He does not seem to have met with any clear example of it, and in his references to this subject he

confuses the co-conscious with the simply alternating type of secondary personality.

There are, as it seems to me, many facts of observation and experiment acquired by technical methods other than psycho-analysis, which we are in danger of forgetting if no effort is made to bring them into conformity with our newer knowledge; and a greater tolerance and a freer co-operation between exponents of different methods of psychological enquiry and of psychotherapeutics are greatly to be desired in the interests of psychopathology and of the science of psychology as a whole.

But although there is room for more co-operation among workers in these specialised fields of study, perhaps the greatest need of the present time is that clinical psychology should make and maintain closer contact with general psychology in all its branches. This need is, I think, especially great in the case of those whose first approach to the science of mind has been by way of Psycho-Analysis or of 'Analytical Psychology.' I am told that by some young people psychology is being regarded as a 'back-number,' and that anyone who wants to be up-to-date should forthwith plunge into the study of Psycho-Analysis without any preliminary training. These people will have to learn that, before Psycho-Analysis was, there was a science of Psychology, and that there will be a science of Psychology when Psycho-Analysis, except as a technical method, may be no more. All that is true and valuable in the body of doctrine which the different schools of analysis are building up, must, in time, become incorporated in that more general body of knowledge which we know as Psychology. That Psychology will be transformed by such incorporation I have little doubt; that it will be in any sense superseded, or its past gains rendered nugatory, I do not believe. Too great engrossment in any special line of work is apt to lead to narrowness of vision, even in those who come to such work prepared by wide general culture and adequate preliminary training. It is therefore incumbent on all of us whose work consists in the study of abnormal mental states by special technical methods, that we should keep in touch with the labours of our colleagues in other departments of Psychology. It is our good fortune, as members of the British Psychological Society, to have unrivalled opportunities of so doing.

CRITICAL ABSTRACT.

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A short but very interesting and suggestive article by Hermann on the subject of "Intelligence and Depth of Thought" opens this number. It is an attempt to establish some connexion and relationship between the older conceptions of the meaning of the word intelligence, as formulated by psychologists of the academic school, and such contributions as psycho-analysis can render to the solution of the problem.

Much attention has been devoted in recent years to experiments in testing the intelligence of children, students and so on, and Stern has arrived at a definition of intelligence in the course of such work which Hermann takes as a starting-point. It runs: "The intelligence is the general capacity of an individual to direct thought consciously on to new requirements; it is the general mental capacity for adaptation to new demands and conditions in life." In considering this definition from the point of view of psycho-analysis the author enquires first what conclusions may be drawn from it in the light of our knowledge and secondly how far it is possible to extend it without losing sight of its meaning and intention as a practical definition.

In psycho-analysis the mental capacity of the individual for adaptation is seen in relation to such problems as the development of the reality-principle, the subordination of the pleasure-principle, the necessity to make changes in the love-objects, the advance from narcissism, the choice of career, the loss of love-objects and so on. Can we say that the individual who resolves these problems satisfactorily is intelligent and that he who cannot adapt himself to the demands of life (in the sphere of love, perhaps), is unintelligent? (In scientific discussions it is always necessary to take the sphere of love deliberately into consideration if it is not to be overlooked.) This conclusion is obviously false; inability to attain the average degree of adaptation to disappointments or privations (as in morbid grief) or inability to advance to full normal development (as in sexual perversions) or neurosis itself, are conditions certainly not necessarily accompanied by lack of intelligence. On the contrary, such persons are frequently of high general mental capacity.

Since intelligence is not opposed to the disposition to neurosis the author submits that it may be regarded as a 'complementary-function,' a partial component of the general capacity for adaptation, not the whole capacity. The *Libido*-impulses make use of other means of adaptation than conscious thought-processes. Thought as a means of adaptation is only applied where the 'interests' of the person are involved (in general psychology regarded as a question of 'attention'); it follows that all that which is outside the interests of the Ego falls outside the region of the intelligence, although those interests which are sublimated forms of libidinous impulses again fall within this domain. The range of interests varies considerably in different individuals; interests are acquired as the conscious personality is acquired, as the *result* of an achieved adaptation to reality. Thus there can, strictly, be no intelligence present until after some interests in reality have been acquired. Broadly, the wider the range of interests the more intelligent the person, that is, the more capable

of adaptation *was* he at an earlier stage. The author then goes into the question of affective influences upon thought and shows that thought as a means of adaptation is secondary or subsequent to affective influences. From the phenomenon of 'suggestibility' he infers that the intelligence can achieve a special condition of adaptation (in this case a submission to the will of another) which is to be distinguished from the capacity for general adaptation to life as a whole; thus it constitutes a special-capacity, besides being a complementary-capacity.

At this point the author proceeds to consider adaptation by means of thought more closely and shows that it occurs in two ways. It comprises, first, the response within to reality without—wishes, strivings, actions concerning the objective world of reality—and secondly it consists in an assimilation of outer reality into a part of the thought-content. The first he calls 'personal' adaptation, the second 'adaptation by means of thought-content' (*inhaltliche Anpassung*). In personal adaptation we are subordinated to the outer world, but in adaptation by means of thought-content we conquer a part of the outer world, understand it and make laws for it. Thus we gain an adaptation, not merely to the actual objective world of reality, but also to that other objective world, the world of truth, of values. Now adaptation by means of thought-content can be qualitatively differentiated; it can occur up to varying degrees of 'depth,' as Hermann calls it, according to the degree of assimilation and harmony it achieves in the whole personality. When the thought-content is assimilated to a certain 'depth' it results in a new inner harmony which he calls 'Depth of Thought.' In this category he does not include personal judgments, nor those thoughts which are the expression of deep feelings.

Looking round for evidence of the existence of such 'Depth of Thought' he points to universal experience in acquiring certain kinds of new and important knowledge. It is the experience, for instance, of every child mastering facts of common knowledge in everyday life. Their truth is borne in upon him and becomes 'depth of thought' in him. The intellectual effect of such a thought is even more remarkable. It becomes a nucleus, a stable foothold, as it were, in adaptation. Freud says, "there are different ways of knowing which are not of equal value....It is true that symptoms disappear when their meaning is understood, but the understanding must be founded upon an inner change in the patient which can only come about by a mental effort directed to that end." Again, "Conviction is not so easily acquired, and if so, it soon proves worthless and unstable." Depth of thought is the substance of every useful conviction, of all effective knowledge. That there are two ways of knowing points to the conclusion that a certain element of time is required in 'deepening' thought. It takes time for the thoughts of a genius to mature and for the world to assimilate them. But time is the external factor; the internal factor is the *resistance* to new thoughts with which psycho-analysis has familiarised us. A struggle arises between the adaptation to reality already existing and the new problem requiring further adaptation. It is clear that this conflict leads to repression and regression, as in the case of *Libido*-conflicts, and that the regression takes the form of earlier phases in the development of the reality-principle, as described by Ferenczi. By means of the primitive (unconscious) belief in magic the new recognition sinks to the deepest levels of the personality. Discoveries in science are characterised by 'depth of thought' and are now recognised as emerging from below the level of consciousness. The deepest thoughts have a 'magic' character even in their

content, that is, they conform to the primitive level of thought although they constitute an adaptation to reality. The author instances the Einstein theory of the relativity of time as closely corresponding to the inappreciation of time found in young children and to the effect of emotional influences upon the appreciation of time in all human beings.

After this attempt to indicate the special qualities of 'depth of thought' the author goes on to relate the conception to the conception of intelligence already arrived at. The capacity for an average degree of depth of thought and the capacity to absorb new ideas to a certain depth must be included in the definition of intelligence, together with that aspect of it which is equivalent to a wide range of interest and a capacity to adapt to new demands in the field of interests. This definition would then run: Intelligence is a special-capacity, a complementary-function and a partial component of the general mental capacity for adaptation. The partial component may be sub-divided into four more or less independent minor capacities, as follows: The existing breadth of intelligence and the capacity to adaptation in and to this region, forming the 'personal' form of adaptation, and the existing average depth of thought and the capacity to deepen thought, forming the capacity for "adaptation by means of thought-content."

The author concludes by pointing out that the capacity to estimate depth of thought in others and to assimilate such thought is dependent to some extent on the affective situation—a certain willingness and a mutual transference of feeling seems to be a necessary preliminary condition. (He remarks pointedly enough that the insane show no depth of thought, no appreciation of truth and no capacity to transfer feeling.) This necessary condition points out the remaining complementary-function of adaptation, namely, the capacity for adaptation in the region of the *Libido*-impulses, which must be at least equal to the intelligence in importance as a means of adaptation in life.

As a speculative contribution to a subject as yet almost ignored by psycho-analytic investigators, Hermann's suggestions have very great interest, more especially in that his enquiry concerns the functions and mechanisms of the reality-principle, since from the outset the exploration of the hitherto unknown and unsuspected pleasure-principle has been the chief concern of psycho-analysis. The nature of the pleasure-principle, and even the fact of its existence, is sufficiently new and puzzling to most psychologists to engage their capacity for adaptation to the full, but to those who have assimilated its truth up to a certain 'depth' the reality-principle appeals as a new field of fascinating possibilities in the direction of acquiring new knowledge. Even in development the reality-principle is secondary and complementary to the pleasure-principle; the failure of academic psychology hitherto to account satisfactorily for adaptation on intellectual and conscious lines and the negative results of its efforts to bring the 'instincts' into some relation with the more conscious aspects of personality illustrate the necessity for a comprehension of the deeper and less conscious aspects before any adequate exploration of the upper levels of the mind can be satisfactorily attempted.

It is perhaps unavoidable that any attempt to consider the reality-principle should give an impression of underestimating the pleasure-principle, although in its present suggestive form Hermann's theories can hardly be justifiably so criticised; nevertheless experience shows that the human tendency to over-rate intelligence is so strong that any support which it may receive from science is to be accepted with due caution.

Reik is a writer whose work on the application of psycho-analysis to the study of religion, and its origin and development, is well known. His interests incline towards group-psychology rather than individual psychology; in an article in this number called "A Case of Collective Forgetting" he makes an attempt to show, by analysing a small occurrence of a fairly common type, a connexion between collective and individual psychological reactions.

On the occasion in question, four people were unable to remember the name of a book which they all knew quite well. A lady in the course of a discussion referred to the book, but could not recall its name, and then three men among the company were similarly afflicted. At her request Reik made an analysis of the point with the lady which at once revealed associations with repressed complexes, adequately accounting for her inhibition. He goes on to show how the 'sympathetic' reaction of the three men, who were clearly 'infected' with her forgetfulness, was due to an unconscious recognition and response on their part to the unconscious impulses in her which caused her symptom. The exhibitionistic-, prostitution- and curiosity-phantasies which proved to be unconsciously associated in her mind with the book—not merely with its content but by a clang-association with its title—had roused, he thinks, the aggressive-, exhibitionistic-tendencies in the men and resulted in a repression in them corresponding to hers.

Reik finds in the incident support for two conclusions; first, that human beings possess other means, besides those of *conscious* thought and action, for communication with one another; that is, that the unconscious regions of one mind have their own means of comprehending and communicating with the unconscious regions of other minds. Secondly, that at a certain stage of civilisation repression is universally operative, maintaining the common primary impulses and their derivatives at an unconscious level in all individuals. These would seem to be two obvious truths, self-evident to the plain man. The ability to comprehend and to respond to what is passing below the surface in another mind is what is popularly called 'intuition' or 'tact,' a faculty which certainly operates most successfully when the content of the intuition, or the purpose of the 'tact,' is quite unconscious. And the most cursory consideration of civilised life shows that repression of the primary instincts is operative in all individuals, for the obvious reason that all are subject to the same hereditary and environmental influences.

But although we may recognise these truths, a scientific psychological explanation of how and why they come to be so is desirable and Reik's contribution does not appear to assist very greatly in this respect. He infers, no doubt quite rightly, that complexes were stimulated in the men in response to their unconscious recognition of complexes active in the lady, which, owing to repression, resulted in their manifesting a symptom similar to hers. The author refers to Freud's work upon the *Zote* (obscene joke) showing that such a joke is a refined exposure of, or sexual assault upon, another person, originally a woman, involving the aggressive-exhibitionistic-complexes; but although it may well be that a similar psychological process was at work in this instance there is nothing to explain how the stimulation of that particular complex arose in the men here, for there was nothing obscene or sexual in the discussion.

In any case, Reik does not go into the question as to how this inner comprehension in one mind of another mind proceeds, which is certainly a question of great interest, one which, if it could be explained, would throw much light on so-called 'telepathic' occurrences and on the problem of 'suggestibility'

among numbers. He does not omit to lay stress on the importance of manner and expression, etc. in conveying unconscious signs. One would like to know, though, how far such signs can convey any indication of the *specific* nature of the complexes involved, over and above the more 'functional' material; the degree of repression or otherwise of some complex unknown. No doubt this question is one of those which, as Freud says, depend upon the varying degrees in all the various factors at work, so that each case would require a separate estimation and judgment. Reik points out, and it is a conclusion which often comes upon one in analytic work, that owing to the same impulses being common to everyone coincidences in their activation must very frequently occur. It is certain that the contents of a popular book would be capable of being associated, probably in many ways, with the primary tendencies in the mind of every reader; the question in this instance is, did or did not the onlookers unconsciously know that the exhibitionistic-prostitution-complex was behind the lady's inhibition, and if so, how? and if not, how did the corresponding complex come to be aroused in them? But the probability is that they did know! for the title of the book which they all knew and forgot was "Ben-Hur," a word foreign to the Viennese but almost identical in sound and spelling with two Viennese words meaning—"I am a prostitute" (*Bin Hure*).

Reik concludes by mentioning that a widespread capacity to forget unpleasant ideas or groups of ideas is an established phenomenon in race-psychology, particularly in primitive races, and refers to Freud's "Totem and Taboo." He remarks that although much has yet to be done in explanation of mass-psychology, it is already clear enough that the same forces are at work, in the individual and in the race, in the course of one life or through a succession of countless generations, bringing about forgetfulness and memory, repression and the return of the repressed.

"Wish-fulfilments in Earthly and Divine Punishments" is a heading under which Groddeck has collected a great deal of material. He writes in a most vivid, terse style, plunging straight into his analytic interpretations, which deal mostly with phantasies of punishment, and he links some of these up with different types of punishment performed in reality by man upon his fellows.

Life after death is a fruitful subject for phantasy. So strong is the lust, and the sly cunning, of the Unconscious that even the idea of eternal punishment is a distorted form of eternal joy. By the close relation of love and death, the fire of desire which runs through the whole of human existence is projected even beyond the grave; belief in Hell and the Devil is an expression of the insatiable unconscious craving for pleasure. In speech, in myth, in custom, fire stands for love; hell-fire represents the wish to prolong the moment of passion through eternity. The dark, moist cavern of hell, in which fire burns, is the female organ; the devil, with hoofs, horns, tail and pitchfork is the phallus; the boiling oil in which the damned seethe is the seminal fluid. Death and the grave signify the return to the mother's womb; being devoured by worms symbolises birth (worm = child). Cremation can mean purification by fire, an abbreviated form of the punishments of hell and purgatory, or an attempt by a voluntary penance to escape torture, or by the scattering of the ashes to evade the resurrection of the body.

Individual analyses furnish special conceptions of tortures hereafter. A young girl imagined the nipples of her breasts being eternally pinched with red-hot pincers. This proved to be a talion punishment for an infantile form of

sexual wish, in which the female was imagined to bite off a piece of the male organ, which formed the child in her. The 'castration' was to be performed on her, by the biting jaws of the pincers. Castration (the punishment *par excellence* in the unconscious mind) is itself associated with the sexual act (through the loss of erection in the organ after emission); beheading can represent both this punishment and the sexual act itself, the flow of blood being associated with emission and the collapse of the body in death with the resulting flaccidity of the organ. The legends of Salome and John the Baptist, of Judith and Holofernes show this clearly; in David and Goliath, both figures represent the male organ, in its two forms, large and small. Popular excitement over executions, tales of atrocities in war, burning of houses, cutting off the breasts of women, and so on, are due to these associations.

Another female patient had the idea that in hell the devil would hammer a thick wooden stake into her genitals, or that she would be torn into four pieces by four stallions. Both were formed from experiences of a sexual kind in which parting the legs was the main feature. A similar idea was met with in another young girl, namely, that the devil would hack at the genitals with a chopper, or hounds with fiery tongues would lick them, while she lay with legs wide-stretched upon a block. This was traced to a past experience connected with a chopping-block and a dog. The phantasy of riding naked on a razor in hell, in another patient, was traced to experiences of a sexual nature from *behind*, and to envy of a brother's organ. The phantasy of being pierced by a red-hot stake and roasted, and the medieval tortures of roasting and staking are symbolic of the sexual act.

The author then goes more closely into the devil as a symbol. The devil is frequently supposed to be black; this is also a common attribute of those burglars and murderers (and bogies) who are suspected to be under beds and behind curtains. The expectation of sexual violence—which Groddeck says is the only demonstration which is ever accounted a genuine proof of love by a woman!—is at the root of the fascination which savages in travelling circuses have for women, and is behind the dread of the native troops during the late war. Black stands for night, darkness and excitement; white for day-light and respectability. Besides this, the devil is frequently represented as brown, not black, and this leads to another group of associations. In one case of a female patient, eternal punishment took the form of the devil inserting a stake into the rectum and twisting it for ever there; analysis clearly showed that the agony caused by the devil and his stake was but a projection into eternity of pleasurable sensations caused by the faeces pressing into and being retained in the anal canal. Results of analyses make clear that besides symbolising the male organ, the brown stinking devil also represents the stool, the importance of which as an instrument of pleasure Groddeck finds still under-estimated, in spite of the work on anal-erotism already done. He says it is a form of pleasure which humanity learns to enjoy earlier and makes more use of and retains later, than the genital,—even to the moment of death. Self-gratification has here its source and earliest form, not merely in a particular class of persons called anal-erotics, but in the whole human race; the gratification obtained is so habitual that it is hardly perceived in consciousness. But experiment and attention bring proof to anyone of the reality of anal-erotic pleasure and also make conviction easier in regard to such problems as infantile birth-theories, the money-complex, paederastia, and 'castration'-ideas (which spring originally from the experience of parting with the faeces).

Groddeck finds that suicide-phantasies are always in closest symbolic

association with the predominating sexual desire. Thus with men, shooting and hanging are the commonest forms of it, representing ejaculation and loss of erection in the trap which symbolises the woman. With women, poisoning and drowning, signifying impregnation or giving birth, and falling from a height, meaning a sexual, moral fall, are commonest. The wish-fulfilment in the idea of re-incarnation is obvious enough; further, the fear of being reborn in some distasteful shape, of the other sex, or in animal form, is founded on a wish. Animals are permitted self-gratification without reproach, and so also are the insane; the author finds that terror of madness has reference to wishes of this kind. Many interesting details of cases illustrating all these points are given.

We can only endorse the author's conclusions, both as regards the enormous influence of the unconscious tendency towards gratification, upon both life and phantasy, and the interpretation of the particular manifestations discussed. Especially in regard to the faecal significance of black and brown-coloured love-objects, two cases in the writer's experience fully confirm Groddeck's conclusions. It is worth noting that the contempt felt for 'coloured' races is without doubt derived from this source, contempt being a characteristic reaction to anal-interests. This cannot be unconnected with the dread of savage licence and of madness, the humiliations involved being dreaded partly as *punishments* (madness as a consequence of masturbation, for instance) and partly as *fulfilments* of repressed *wishes*.

Eugenia Sokolnicka contributes an extremely interesting account of a cure of an obsessional neurosis, in a boy of 11½, in the short space of six weeks. As the author herself makes clear, a complete and true analysis was not possible; it was to some extent modified by educative and disciplinary suggestions based on analytic comprehension of the case.

The child was extremely ill, quite unable to attend school or learn, almost unable to collect his thoughts at all or attend to anything; his whole life was dominated by compulsive ceremonies, which also involved his mother's whole time and attention. He was half-starved, for every mouthful of food occasioned the most terrible doubt and anxiety and required the most elaborate precautions and performances. This applied also to all the other everyday requirements of ordinary life. Besides this, the boy frequently lost consciousness and became very violent, biting, kicking and tearing the mother and her clothes, until he would fall at last sobbing and exhausted into a chair. These attacks had given rise to a suspicion of epilepsy. Apart from this, the child was exceedingly good and sweet-tempered, dutiful, scrupulously honourable and truthful; in fact, too good.

Sokolnicka gives a most attractive account of the skilful way in which she dealt with this difficult case in such a short time, and a most vivid picture of the psychological situation in the child's mind. The little obsessions and compulsions are so easily interpreted and the childish terror and mental agony so monstrous that the story gives, as it were, a flashlight exposure of the Unconscious, bringing a conviction of the reality of these dark psycho-analytic truths, seldom received with such simplicity and completeness in analyses of more complicated cases. We see the exciting sexual thoughts and wishes almost in the bare crudity of their childish forms; the struggle to fight them goes on almost before our eyes, and we perceive almost actually the awful burden of repression enveloping the child. The love for the mother, belief in

magic, sexual curiosity, onanistic impulses, the terror of the forbidden, make up this tale—these are the hidden causes which underlie the disease. This little account should go far to convince any doubters of the overwhelming significance of the sex-life for every individual.

Freud's preface to the fourth edition of the "Three Contributions to Sexual-Theory" is printed here. It deals with the opposition which this volume above all his other works has always met with. He says that although the psycho-analytic theories in regard to the Unconscious, repression, conflict, the mechanisms of symptom-formation and so on, have been more widely accepted he sees no reason to believe that the doctrines laid down in this book are less well-founded on careful and unprejudiced research than any others. Moreover, the explanation of the opposition lies so close to hand. So many doctors have not the patience or the experience necessary for finding out these truths for themselves in prolonged analyses, or else the requirements of a quick cure make it impossible; and doctors who do not practise analysis are not in a position to form an opinion about that which only analysis can reveal. If mankind understood how to learn these things from the direct observation of children the "Three Contributions" need never have been written.

Again, the emphasis in this book on the significance of the sexual element in every department of life has led to an exaggeration of the idea, so that the nonsensical reproach is now common, that psycho-analysis explains 'everything' by sex. And yet Schopenhauer had previously shown clearly enough the extent to which sexuality—in the usual narrow sense—influences the life and deeds of mankind. As for the broader sense of the word sexuality, which includes those impulses which are found in children and in perverts, those who regard psycho-analysis with contempt are reminded that the divine Plato called it—*Eros*.

Under the title "Autistic Thinking in Children," Markusiewicz describes two cases in which phantasy-construction proved useful in enabling the subject to deal with difficulties in life. The process is compared with the delusions of the insane. Sachs gives eight instructive notes of observations made in the course of analytic practice. Hitschmann contributes a note insisting on the importance of urethral-erotism in the obsessional-neurosis, ranking it equal to the anal-sadistic partial impulses. He relates the common compulsive washing symptom to this impulse, by the equivalence of water and urine. The question has to be considered whether the prevalence of urethral-erotism and its importance in this disease are constitutional, as with the anal-sadistic impulses, or whether it plays a more symptomatic part. Grüninger reviews the subject of "Psycho-Technique and Psycho-Analysis," remarking that the decay of academic experimental psychology appears to be leading towards the study of the psycho-physical 'conditions of work.' In this field, probably more work has been done in this country than abroad. The author dwells upon the difficulty of testing the affective factor and regrets that 'psycho-technique' works upon the assumption of a stable emotional factor, which is actually very rarely present. Flournoy contributes a note on the symbolism of the key, with some drawings by an insane patient, and some general remarks upon symbolism. There follow, in conclusion, reviews of twenty books.

JOAN RIVIERE.

REVIEWS.

Collected Papers on the Psychology of Phantasy. By Dr CONSTANCE E. LONG.
Baillière, Tindall & Cox, 1920. pp. xii + 216.

This volume, composed of papers which have been read before various societies between the years 1916 and 1920, presents the analytical standpoint of a sane and observant mind. The book is singularly free from fanaticism and the style is simple and unforced. The meaning of analysis is perhaps brought home to the lay reader more humanly, naturally and convincingly in this book than in any other volume of its kind. The illustrations are drawn from many sources, the psychology of the child being particularly referred to. The significance of analytical psychology in its practical application to human affairs is to Dr Long a matter that is intimately bound up with many of the problems existing to-day in Western civilisation. She emphasises the need for the unconscious as being one of the most important factors behind modern unrest. In conjunction with other observers she finds that the problem of man does not only lie in a satisfactory adaptation or relationship to objective reality, but also in a satisfactory relationship to the unconscious. From this point of view, man stands between two worlds; the world of the unconscious and the world of reality. Neurosis results from a failure of adaptation in one direction, or in the other direction; or in both directions. Dr Long associates herself with the Freudian interpretations up to a certain point. She finds, however, that the unconscious is more than an infantile wish-fulfilling apparatus produced by repression. In the unconscious lie the under-expressed elements of the psyche. When the psychology is one-sided in its conscious manifestation the other sides, or missing psychological functions, are found to lie towards the unconscious. Neurosis, therefore, to Dr Long, is not merely a question of partial failure of repression, and psychic health does not rest on a basis of repression. Neurosis is the result of a one-sided psychological development, and psychic health is a matter of growth. Neurosis is psychological mal-development. Such a view gives to the unconscious a considerably wider significance than that attributed to it by the followers of Freud. The over-development of one particular psychological function, such as the intellect, leads to a disproportion in the psyche as a whole, and to the non-expression of other human functions that should be developed for a normal and harmonious life. In such a case, the feelings lie towards the unconscious and appear therefore in the products of the unconscious, namely, in the phantasies and dreams. Viewed from this standpoint, the products of the unconscious appear to Dr Long as giving valuable indications of the direction along which the life-line of psychological health should be developed, even although that may involve a partial sacrifice of the most valuable and most fully-developed function. It is in this sense that the dream becomes *compensatory*. Dr Long points out that the compensatory theory of the unconscious mind is perhaps one of Jung's most valuable ideas. The wish-fulfilment theory of dreams narrows the possibility of interpretation, so that monotony results. The reaction to this monotony is frequently interpreted as resistance, but it is question-

able whether this interpretation is always justifiable. A theory that gives a causal explanation only to human psychology, as a whole will naturally meet with opposition, which need not be regarded as pathological. On the other hand, Dr Long emphasises the importance of the work of Freud, whom she regards as one of the immortals, and points out the danger of excluding the sexual interpretations. She seems to incline to the view that a reductive sexual-objective analysis, carried to its extreme, produces a profound pessimism, which few can support with equanimity. To many the weight of the past becomes too overwhelming, as the principle of determinism is relentlessly developed to the exclusion of all possibilities of individual creative effort. This may prove to be an actual difficulty in the reductive technique, where the possibility of a prospective function of the unconscious must necessarily be neglected. Dr Long rejects the idea of the censor as defined by Freud as a real explanation of symbolism. She finds the conception of the censor a useful one, but she believes that Freud's lasting fame will not rest on either the retention or the overthrow of his theory of the censor. The wish-fulfilment aspect of the unconscious she accepts, but does not find the dream to be a result of the conflict between the wish-fulfilling unconscious and the censor. While for Freud the dream in its essence is a veil for repressed desires which are in conflict with the ideal personality, she finds herself in agreement with Jung when he observes that "the dream is in the first instance a subliminal picture of the psychological waking state of the individual." Instead of being only the fulfilment of a disguised wish, it is a universal means of primitive expression.

She finds natural danger in the tendency to give the dream symbols a more or less fixed value. "If it is decided *a priori* that practically all ideas symbolised are sexual, no other ideas will be sought or tolerated." A prolonged reductive analysis tends to make the patient jump to stereotyped conclusions concerning his dreams, so that the value of the symbol, and the whole idea of symbolism, becomes artificially contracted. The question of the objective and the subjective interpretation of the dream is discussed. The Zurich school has given the subjective interpretation of the unconscious material as an important contribution to the analytical work. In the subjective interpretation "all the rôles played by the people or things in the dream are regarded as expressions or tendencies or attitudes or views of the dreamer.... Both kinds of interpretation are valid. The one is analytical and leads down into the depths of the impulsive life. The other is synthetic and brings back from the depths the raw materials for the purpose of constructive life. This two-fold interpretation fits into the general scheme of life, because adaptation is itself two-fold, *viz.* to the inner subjective world of archaic reality and to the outer objective world of material reality."

Dr Long lays especial stress upon the value of phantasy. She quotes from Jung's book on psychological types (which is at present being translated into English): "Phantasy is the creative activity which gives birth to the answers to all questions admitting of answers. It is the mother of all possibilities, in which the inner and the outer world are united in a living whole. It was, and always is, phantasy which builds the bridge between the irreconcilable claims of the object and of the subject, of extraversion and introversion. In phantasy alone are both processes united.... What great thing has there ever been that was not phantasy first?... Every happy idea and every creative act had its beginning in imagination and in what we are accustomed to call childish

phantasy.... The dynamic phases of phantasy lie in its playfulness, which is suitable to childhood and thus appears irreconcilable with serious work. Yet without this play of phantasy no creative work has ever seen life."

Phantasies, as a synthetic function, contain only the potential value. As phantasies alone, they remain worthless. Through a selective discrimination the valuable elements in the raw material can be led forward into a real application. Phantasies are both good and bad, but to reduce phantasies always to a sexual basis is to destroy the prospective or creative side that they contain. Dr Long finds in the unconscious a forward-reaching or prospective movement—what might be called an evolutionary impulse—which aims at the extension and development of the individuality and seeks to overthrow the regressive and fixed elements in the psychology. She shows that this movement towards individuation has much to do with the theme of re-birth, which recurs frequently in the dream material, and to which has been given too exclusively the interpretation of concrete incest. Such themes as the re-birth theme originate in a part of the unconscious that cannot be called personal. Dr Long, as has been already said, does not hold the view that the unconscious is produced only by repression in early life. To her the unconscious is pre-existent to the conscious mind. This part of the unconscious is related to the brain in so far as it is "an ancestral inheritance, and possesses the pre-formed instincts and archetypes of apprehension, which are present as potentialities of future thought and feeling. As consciousness emerges out of unconsciousness the mind climbs up the genealogical tree as the body has done, that is, its function becomes more and more differentiated." In connection with this idea she quotes a phrase of Jung's to the effect that the intellect is born out of mythology. "As the child develops consciousness and his experience accumulates, the *personal unconscious* begins to come into existence.... In this view the personal unconscious is regarded as the acquisition of the individual's life, and is differentiated from the impersonal unconscious, which is an historical inheritance." She illustrates by giving an example of a dream concerning a dragon, pointing out that the dragon is a mythological image belonging to the impersonal unconscious. She gives many illustrations of the symbolism of the infantile personality in dreams, and the myths that are found in the unconscious concerning the fate of this element. Such interpretations are, of course, incompatible with the conception of the unconscious as being an infantile wish-fulfilment apparatus. Dr Long's work is extremely valuable. It is impossible to give a detailed discussion of each paper; the material is abundant and rich, and many excellent psychological portraits are drawn. Throughout the book there is a serenity and balance that is refreshing in these days of over-intellectualised or over-rationalised analytic publications.

MAURICE NICOLL.

Psychology and Psychotherapy. By WILLIAM BROWN, M.A. (Oxon.), D.Sc. (Lond.), Reader in Psychology in the University of London, etc. London: Edward Arnold, pp. xi + 196. 8s. 6d. net.

To those who have followed Dr Brown's contributions to the literature of the war neuroses, this book will be in large part familiar. In fact there is not a great deal which has not already been published. For all that the volume should be one of great value, and that for a number of reasons.

In the first place the author maintains an admirable attitude of independence in regard to the numerous theories of modern neurologists and psychopathologists. Freud and Jung, Déjérine and Babinski are all submitted to criticism which is sufficiently detached to be at least uncommon in these days of scientific partisanship. The true Freudian will no doubt be the most incensed, not only by the somewhat cavalier attitude which the author adopts towards the Freudian theory, but also by the use of the term psycho-analysis in a sense that is far from Freudian. In one passage for instance (p. 161) it is used as synonymous to autognosis. Now autognosis is a term coined by Dr Brown himself for a therapeutic measure that is certainly not identical with psycho-analysis. Furthermore, criticism is bound to be elicited from the Freudian ranks by Dr Brown's persistence in associating the phenomenon and theory of abreaction with Freud. As far as the theory of abreaction goes Freud—if my information is correct—discarded it some years ago, just as he discarded hypnotic analysis.

In the second place this book should prove very helpful to practical psychotherapists for its statement of the various theories of the psychoneuroses. Considering the size of the book this section is most adequately and, as we have already said, impartially carried out. Of the multitude of books on psychopathology which have appeared in recent years, too many offer a theoretical explanation which is one-sided as well as dogmatic. The atmosphere of the psychological lecture room is quite useful in this section.

In the third place the book cannot fail to possess a distinctive value as a record of the war work of one of the few psychotherapists who, by reason of opportunity, skill and personality, "made good" during the war. But the discerning reader will not fail to recognise that the unquestioned success which attended Dr Brown's work at an advanced neurological centre during the war was due in far greater degree to affective therapeutic measures than to any procedure that could be described as analytical.

Part IV is devoted to "Lessons of the War." It occupies a quarter of the book and throughout it we constantly run across phrases such as "enthusiastic confidence in his doctor," "expectation of a complete recovery" (p. 132) and so on. Now the combination of affective and analytical methods must always remain at the very heart of the problem which the psychotherapist has to face. Both schools of analysts have recently adopted an attitude less unpromising than their original one upon this point. Those who stand outside these two schools have always recognised frankly that suggestion in one form or another must have a place among our psychotherapeutic methods. It certainly has a very large place in Dr Brown's method, and though he is careful never to use the word "hypnosis" without the epithet "light" we must frankly confess that we are not greatly illuminated by all that he says on the subject. We see clearly that Dr Brown blended—some would say "mixed up"—affective and analytical methods with admirable results in practice, but he does not convey to us what we really do want to know above all things, and that is what criteria of mentality, symptoms or history does he associate with his use of analytical methods and affective methods. We find for instance on p. 131 the following statement: "For insomnia suggestion treatment at night is often very efficacious." No one will have any difficulty in accepting this statement, but would Dr Brown have us believe that the treatment of this one symptom by suggestion may be carried out without compromising in any way the prospects of a cure by analytical methods? Or again, do all these

patients whose insomnia Dr Brown treated successfully by suggestion come under the heading of hysterics? For we read on p. 126, "I agree entirely with Pierre Janet that only hysterical patients can be hypnotised." This is an ancient generalisation which has been controverted again and again by the most reputable psychotherapists who use hypnotic suggestion. Quite apart from the therapeutic value of hypnotism, no good can be done by making such a claim. If Dr Brown had said that he and Pierre Janet could only hypnotise hysterical patients, the critic might have been astonished, but could not have dissented.

Again, we should like to ask with all due respect what—if anything—is meant by the phrase on p. 119, "The mechanical processes of auto- and hetero-suggestion"? And again, what is a "worry complex" (p. 77)? Surely this is the sort of useless phrase that we might expect an academic psychologist of Dr Brown's standing to avoid.

But these after all are minor points. If we were asked to make a general criticism of Dr Brown's system of psychotherapy, as described in this book, we should say that the author leaves us with the impression of having very successfully and very opportunely dealt with psychoneurotic breakdown in a vast number of cases. He appears to have obliterated symptoms most triumphantly: and that, no doubt, was what he was called on to do in his war work. But the business of psychotherapy in daily life makes a wider demand than this. We have to enable our patients to readjust their passions and desires so that a state of harmony both internal and external may be set up with some prospect of persistence. Dr Brown enumerates his four methods, which are psycho-synthesis, psycho-catharsis, autognosis and the personal influence of the physician. Of these only autognosis refers to the problem of readjustment. The two first have to do with re-association and the last is what the analysts call transference and the older hypnotists call rapport. It is with respect to autognosis that we feel some misgivings. The "long conversations" which appear to constitute its technique sound a trifle vague, and the patient's problem in life, apart from his immediate symptoms, appears to receive secondary consideration. But this may only be an impression which fuller knowledge of Dr Brown's methods in civilian and peace time work would dispel.

Finally the volume is one that every open-minded psychotherapist should read with great care, for though he may differ from many of Dr Brown's views he will not fail to profit from the account of the author's work in France, nor will he fail to be stimulated to fresh reflection on many problems by the lucid statement of the various theories which are current to-day.

H. CRICHTON MILLER.

A Young Girl's Diary. Prefaced with a letter by SIGMUND FREUD. Translated from the German by EDEN and CEDAR PAUL. London: George Allen and Unwins, Ltd., 1921. Price, 12s. 6d. net.¹

The publishers are, I think, to be congratulated upon their boldness in issuing this volume. It tells, in her own colloquial phrases, how an Austrian girl acquired, during the years of puberty, a knowledge, more or less exact,

¹ The publishers wish it to be stated that the sale of this book is restricted to such members of the educational, medical, and legal professions as are interested in psychology.

of the chief biological facts of sex and family life. The book is at once autobiographical and anonymous. Unfortunately, the only information which the preface offers about the author is that she was "a young girl belonging to the upper middle class," writing, we gather, somewhere between the years 1900 and 1915. Much is thus left obscure. Her health, her ability, and her character, whether she was of a supernormal intellect, or of an abnormal temperament and disposition, these are circumstances that we are left to piece together from the style and statements of the diary itself; even the editor refrains from signing her name and from recording her scientific credentials. For such regrettable omissions diarist and editor (if, indeed, they are distinct individuals) are perhaps less to blame than the general attitude of the lay public towards explicit revelations and discussions, however innocent in their ultimate intention, of sex and sexual interests.

With all its shortcomings, however, the book still forms a valuable and suggestive document. To those who, whether teachers, physicians, or psychologists, happen already to have become acquainted with the inner mental life of one or two active and intelligent girls during the years of early adolescence, the pages that relate specifically to sexual physiology will bring little that is fresh or unfamiliar. The shocks, the conflicts, the secret experiences, the preposterous inferences and yet more preposterous gossip picked up from maid-servants and school-fellows as misinformed as they are unscrupulous, these are vividly illustrated upon almost every page; but they are, or should be, by no means new to the psychologist of childhood. On the other hand, the reaction of such incidents upon the child's mind, the mode in which (as Freud puts it in his preface) "the mystery of sexual life first presses itself vaguely upon the attention, and then takes entire possession of the growing intelligence, so that the child suffers under the load of hidden knowledge, but gradually becomes enabled to bear the burden," above all, the subtler changes so induced in the child's personal attitude towards her father and mother, her brother and sister, her school masters and school mistresses, and her boy and girl acquaintances, all this is poignantly suggested. In particular, it is intensely instructive to watch the processes of suppression, repression, and complex-formation actually in operation, as it were, beneath our very eyes.

This being so, it is singularly unfortunate that we have no means for deciding how far the experiences recorded are really typical of the average child at school. In the publisher's note it is stated that the book is "not a work of fiction," but the "genuine and unedited diary of a young girl"; and it is added that "innumerable such diaries are probably written." Those who have made a scientific study of the mental processes and literary expression of school children will feel immediately that either one or the other of these statements must be untrue. Either the writing is the writing of an older person, or the child is a child of unusual ability and abnormal singleness of purpose. To the reflecting reader the earlier pages appear at first sight to be the composition, not of a girl of eleven or twelve, but of an older person deliberately recalling, as far as possible *verbatim*, her earlier thoughts and mental comments upon one exclusive problem. If this impression is wrong, and if these things were really written on the days on which they occurred, then we must conclude that the young girl possesses a fluency of writing and a power of explicit logical discussion that can be claimed by probably not one in five thousand children of the same age; and that the unity of interest with which, day after day and year after year, she keeps to the same central issue through almost every page

and every entry of the diary is tantamount to a pathological obsession. It is to be noted, however, that the editor, in her preface, claims merely that nothing has been added or subtracted from the author's own narrative; she does not claim that the dates of the entries are true: and thus her assurances are quite consistent with the view that the writer, relying upon a vivid verbal memory or perhaps upon contemporary notes, has thrown her childish recollections retrospectively into diary form.

Encouraged, no doubt, by the popularity attained by such writings as those of Daisy Ashford and Opal Whiteley, so many publications, purporting to give the unaided work of young children, have recently been issued, that it is perhaps worth while to labour this particular criticism. To cast a work of fiction into an autobiographical form, and to change names and dates from genuine autobiographies in a way that is utterly bewildering to the scientific student, has always been regarded by the man of letters and the man of business as a legitimate literary device; while members of the general public, unaware of such conventions, are apt to take the *Book of Job* and Rider Haggard's *She* at their face value as narratives, equally authentic, of literal and absolute fact. I may, therefore, in some detail enumerate the chief reasons, which make it difficult to be quite sure that the present diary was set down, by a child so young as is implied, at the actual time of the events recorded.

(1) The diary is begun before the age of eleven, and continued throughout the next three-and-a-half years. During that short period the child writes over one hundred thousand words. This is hardly the achievement of an average girl. The writing, too, is done in secret; and the loose leaves are kept private (without any facilities in the earlier years for locking them up) both from an inquisitive sister who shares her room, and from an anxious mother who already harbours suspicions about the girl's letters and thoughts.

(2) Some of the entries for a single day run into five pages of print, nearly two thousand words. Four hundred words an hour is a good speed for a child of this age. But how many would continue at that speed, voluntarily and without discovery, for five hours during a single day? On one occasion the girl copies a letter of four printed pages; this letter has taken her friend four days to write, and takes the diarist herself (judging both by her own statements and by the dates in the diary) three or four days to copy; and yet, within the same week, there are several longer entries, which, seeing that their dates are consecutive, profess each to have been written within a single day. The speed and quantity of writing thus implied is neither consistent with itself, nor with what we know of the powers of the average girl. Further, why trouble to copy the letter? Why was it not as easy to keep the letter secret as to keep the loose-leaf diary secret? We are left to conclude that this was the only device which the writer could adopt for introducing its contents into a publication which was to be, in literary form, a diary and nothing but a diary.

(3) Although much of the phraseology consists of genuine childish idiom and schoolgirl slang, nevertheless, beneath this simple language, there is discernible, even during the first few months, a sustained ability for consecutive logical thinking such as would rarely be found in a child so young. The prolonged arguments against parental views no doubt represent rightly enough the general feelings of the growing girl at this age; but there are very few children of eleven who would have the patience and power to set out every step of the discussion with such logical explicitness. The girl, it is true, attends

a high school (*Lyceum*); and is, indeed, fairly high in her class. But her school records, even when she is putting forward her best efforts, show no signs of such unusual literary genius.

(4) The diary, as a literary work, is extraordinarily coherent and extraordinarily intelligible. Very few diaries, which, like this one, are naturally written only for the eyes of the diarist, would be comprehensible, or even interesting, to a second party. But here every line can be immediately understood. The very first paragraph carefully gives the names, and implies the relations, of the three chief actresses, Rita, the diarist, Dora, her sister, and Hella, Rita's closest friend. Originally, it is true, the diary was written to be shown to Hella; but this seems never actually to have been done; and, even so, the deliberate explanations would not be necessary for so intimate a friend. Lizzi, for example, is introduced; and we are immediately informed that she is Hella's own sister. Later Hella's cousins are named; and the relation is explicitly announced. Children who are scribbling diaries, rapidly and on the sly, do not stop to mention in detail the family relationships of people they have known for years.

Individuals about to play an important part in the drama are nearly always encountered for the first time just before the interesting adventure in which they are concerned takes place, so that the description of each person is fresh in the mind of the reader. The result is that, from the first page to the last, not a single foot-note is required to elucidate the text. Is there a single diary of any young person so self-explanatory?

(5) The internal coherence and dramatic unity of the narrative are no less amazing. There is little or nothing of the bare time-table of events—"yesterday morning I went there...; in the afternoon I came here...; to-day I have done so and so..."—dull and personal trivialities with which young people's diaries are for the most part occupied. School, and the various incidents and personages met with in school life, are occasionally reported in detail; but even these are introduced only as converging upon the big central theme; and, from commencement to close, interest is assiduously sustained from paragraph to paragraph by making the last entry of one day lead up, as a general rule, to the topic of the next.

The book begins appropriately enough with the decision of Rita, and her most intimate school friend, Hella, to start a diary, now that they are entering the high school. Almost immediately the main problem of its pages—the relations of the young writer to her relatives and to persons of the opposite sex—is formulated in her childish way; and the girl then introduces and describes the school mistress who is to have such an influence upon her during the next few years. Then, stage by stage, through the narrative of actual experiences and conversations, Rita gradually analyses and defines her problem; and tells how she acquires and corrects her personal views. A climax is reached when her mother is seized with illness, and eventually dies. The favourite school mistress, who meanwhile had left the school to marry, visits the child again, and comforts her. Rita, having now acquired the knowledge that she wishes, and being thus gravely impressed by her mother's death and by the kindness of her former teacher, at length gives up her previous interest in improprieties; and, finally, as she is preparing for a winter holiday in the hills, loses her other parent. Thus, this self-contained and most significant section of her life comes to a natural close; and, appropriately enough, the diary breaks off.

These four or five peculiar features are, it is true, compatible with an alternative hypothesis, different from that which I have already put forward. It is possible that where the mind (in current phraseology) can draw upon reserves of energy ordinarily locked up in the unconscious, there its performances may rise distinctly above those which are characteristic of the average child under average conditions. A possibility of this sort is suggested by the fact, noted by Dr Kimmins in his recent study of *Children's Dreams*, that the young child's compositions describing his nocturnal dreams (and, I may add, the narratives of older children describing their day-dreams) are, both in quality and quantity, unexpectedly above the average level for English school children at the particular ages studied. Such a conclusion, however, dealing as it does with a marked and exceptional deviation from the normal, needs fuller evidence for its support. And, even so, when the results soar to the sustained level of the present work, it cannot discharge us from the necessity of still considering the author as a genius; for, in the view of some, the very definition of genius consists in the power to draw, to a degree that is denied to most, upon subconscious reservoirs of mental power.

In spite of all these criticisms, I do not wish to imply that the picture which the work gives us of the child's attitude towards these special problems is, in its general character, at all untrustworthy. Internal evidence (which, again, apart from the vague assurances of the editor, is all we have to go upon) is clear in showing that the substance is as genuine as the form is disputable. It is evidently the substance that the editor has considered of greatest interest.

On the other hand, it is the literary form that will interest the special public to whom the book is addressed. The uninformed layman, it is true, may be startled or disturbed to find such notions in a young and girlish mind. But, as every student of child life knows, it is not the harbouring of persistent speculations or perverted views on sex that is at all remarkable: it is their full and logical commitment to paper. Could a child of twelve write so on such a topic? And, if so, could it be intellectually and morally normal?

A word of praise is due to the translators. To discover English equivalents for the original misspellings and colloquial idioms of a German school girl, and yet to preserve the easy and natural flow of the narrative was no easy task; and this task they have performed with singular felicity and skill.

CYRIL BURT.

Psycho-Analysis and Behaviour. By ANDRÉ TRIDON. New York: Alfred A. Knopf, 1920; London: Kegan Paul, Trench, Trubner and Co., Ltd. Price, 10s. 6d. Pp. 354.

Whether it is possible to achieve the aim of which the author informs us in the preface to his book—"This is an attempt at interpreting human conduct from the psycho-analytical point of view"—must be a matter of some doubt. Smallish books which attempt to cover vast areas of thought of a profound and complicated nature, and at the same time make a bid for large and popular audiences, are rarely successful: to preserve accuracy in the presentation is almost impossible. The present volume, though containing some useful material, suffers from the same defects as many of the other

works on Psycho-Analysis issuing from America in astonishing numbers. It has attempted to cover far too much ground, for one thing; a glance at the contents-list will show the wide—too wide—range of the book which deals with The Organism, Problems of Childhood, Progress and Regressions, Sleep and Dreams, Problems of Sex, The Psycho-Analytic Treatment, etc. This objection, however, is far less important than the next objection which has reference to the method employed. The whole book is written in a disjointed style, which carries one on in a series of jerks; abbreviated and partial statements, end-conclusions (necessarily appearing quite dogmatic and unbased, even when accurate in substance), "popular" instances and sayings—all these abound, serving to create an impression on the reader's mind of hotch-potch and hasty verdicts. Such a treatment involves the writer frequently in inconsistency, even contradiction.

But a far more important feature of the book than anything yet referred to—a feature which goes far to stultify the book as a whole—is the constant occurrence of most misleading and superficial statements concerning matters of vital import. It would seem, indeed, as though the author had pursued the same disastrous policy which he recommends to his readers on p. 271, bidding "all students of Psycho-Analysis to glance at a few books on Hypnotism, to convince themselves of the neurotic character of that practice." It cannot be too often and too strongly reiterated that "glances" into profound and complex matters are worse than useless—in truth, such glancing tends perilously near to charlatanry. Mr Tridon's remarkable mis-statements or partial statements (which become almost equivalent to mis-statement) can surely only be due to a lack of mastery of the subject. Take, for instance, this from the chapter on "The Sexual Enlightenment of Children" (p. 68), "Accurate information of a scientific type stops inquiries and day-dreams and vouchsafes to the child's mind the peace that comes with the securing of evidential facts, satisfactory to one's reason." One must ask: Where did the writer obtain this "fact"? Certainly not from study of Freud, Ferenczi, or Ernest Jones—to name the three leading names in the Psycho-Analytic movement: certainly not from the first-hand study of childrens' or adults' minds, and equally certainly not from the study of history, religion, or primitive man.

On p. 207 we read: "According to whether the majority of dreams refer to the past, the present, or the future they may reveal a regressive, a static, or a positive tendency." Again we ask whence does the author derive the idea? Not from Psycho-Analysis assuredly.

These are but two instances of a mass of similar confused statement, cropping up everywhere among much that might be useful and accurate if more fully developed.

BARBARA LOW.

Dream Psychology. Psycho-Analysis for Beginners. By Prof. Dr SIGMUND FREUD, author of "Interpretation of Dreams." Authorised English translation by M. D. EDER. With an Introduction by ANDRÉ TRIDON. The James A. McCann Company, New York, 1920.

This book is noted in these columns, not for review, but for the purpose of warning unsuspecting readers who may imagine that it is what it purports to be—a new book on Dream Psychology by Professor Freud, translated by Dr M. D. Eder.

In actual fact the book is a "pirated" *réchauffé* of Professor Freud's small book on dreams, the authorised version of which was translated in 1914, by Dr M. D. Eder, and of his *Traumdeutung*, translated by Dr Brill in 1913.

Mr André Tridon, who writes a Preface, congratulates the publishers on this volume. We prefer not to characterise the action of a writer who lends his hand to such a transaction as this.

BARBARA LOW.

Lunacy in India. By A. W. OVERBECK WRIGHT, M.D., M.B., CH.B., M.P.C., D.P.H., Major I.M.S. pp. xii + 406. London: Baillière, Tindall and Cox. Price, 21s.

As stated in the preface the object of this book is three-fold: (1) to summarize the condition of lunatics in India, and the means available for treatment; (2) to emphasize the importance of toxæmias as aetiological factors in a very large proportion of such cases; and (3) to place on record the views of the author gained from nineteen years residence in the East.

In almost every respect the work under review must be held to be disappointing, except perhaps to those who hold the author's views as to the extreme importance of the leucocyte count as a means of classification and diagnosis of mental diseases.

Except in the statistical and medico-legal sections there is comparatively little in the book which has any special reference to the problem of the Psychoses in India, and very many of the illustrative cases are from English text books and works of reference.

The importance of the Toxæmias as aetiological factors will be felt by many to be unduly stressed, and the classification which considers paranoia to be due to metabolic toxæmia, and katatonia and hebephrenia to bacterial toxæmia, will probably not find many adherents.

In the chapter on Psychasthenia, Neurasthenia and Hysteria there is the confusion of distinct clinical entities which must arise if there is no sympathy with the psychological work which has been done on the Psychoneuroses. Neurasthenia is considered as a practically similar condition to Psychasthenia, the essential differences being that in the former there is no evidence of hereditary taint.

The chapter on Psychology is derived mainly from the works of Stout and McDougall, but the author adds yet another classification of the instincts which he considers most useful to those studying mental diseases. He considers that the sexual instinct is quite apart from the instinct to perpetuate the species.

Under the term sexual instinct he groups the connate tendencies leading to the formation of all that in common parlance is indicated by the words "womanly" and "manly." The instinct to perpetuate the species is apparently confined to the frankly libidinous desires, normal or abnormal.

It is typical of the author's attitude towards the psychological factor in mental diseases when he states that psychologists are now practically unanimous in affirming that the views of Freud and Jung are unsound, and that in another twenty years their teaching will be forgotten or stored as curiosities in scientific libraries.

Galvanism is strongly advocated as a method of treatment both in the acute psychoses and in the psychoneuroses.

M. B. WRIGHT.

The Psychology of Functional Neuroses. By H. L. HOLLINGWORTH. Appleton and Co. New York and London. pp. 259, price \$2.

There is a novelty in the plan of this book which arrests one's attention. Instead of attacking the problems of the neuroses by means of direct study of individual cases and individual symptoms, the author, who is a professional psychologist, has approached the subject in quite another way. His essential method is to apply a series of standard laboratory tests to a very large number of cases with the aim of ascertaining what generalisations may issue therefrom.

He begins by giving a very cursory review of the medical work in this field, his attitude towards which is decidedly superior and disparaging. In searching for a central concept that may serve to unify the various data he rapidly disposes of such ideas as are implied in the terms 'dissociation,' 'fixation,' 'conversion,' 'general suggestibility,' 'conditioned reaction,' 'pithiatism,' 'symbolism' and so on; the only one to which he gives even a conditional consideration is 'regression.' Incidentally he quotes some interesting passages from Herbart's *Text-book of Psychology*, containing several anticipations of the Freudian conceptions, such as the rivalry of mental elements, the suppression of the weaker by the dominant, persistence of the suppressed element below the threshold of consciousness, its transformation in the effort to express itself, distinction between the conscious and the unconscious mind, and so on; the main difference here is that Herbart operated in terms of ideas, and not of those of more dynamic elements. It is historically untrue, however, to say that these conceptions were 'adopted bodily' by Freud from Herbart (p. 10). It may be imagined that the author will have nothing to say to Psycho-Analysis. He dismisses what he calls "this extravagant and analogical machinery" in the following words: "The intricate mazes, transformations, and epicycles of the psychoanalytic dogma in its present form resemble the familiar Ptolemaic astronomy, which waited long for a simple formulation that would place the observed facts on a basis of actual understanding" (p. 150).

The author finds his unifying concept in Hamilton's term redintegration, though he somewhat modifies the sense of this, defining it thus: "Redintegration is to be conceived as that type of process in which a part of a complex provokes the complete reaction that was previously made to the complex stimulus as a whole" (p. 19). Thus when a child has been frightened by a complex stimulation emanating from a dog, the entire fright reaction may subsequently be evoked by one part alone of the stimulus, e.g. a growl, even though this emanates from a parent hiding behind the door. He then discusses four types of faulty redintegration, those characteristics of the hypomanic, the feeble-minded, dementia praecox and the psychoneurotic respectively. The distinguishing feature of the last-named type he finds to be a tendency to react in redintegrative fashion to outstanding and often irrelevant items that are only an insignificant part of the total complex experience. This he traces to "faulty sagacity," to use James' term. He is now confronted with the obvious problem of the cause or meaning of this particular mode of faulty response and it must be said that he evades this problem in a distinctly barefaced manner. "If it now be asked why some individuals show stronger inclination toward the redintegrative type of response to outstanding but

irrelevant details, it is perhaps most pertinent to point out that the same question should be asked of those whose descriptions of the psychoneurotic picture are in terms of symbolism, free-floating affect, conversion of libido, pithiatism, etc. In such cases no clear basis of individual differences, and hence no adequate etiological account is forthcoming. Hence even if we could offer no satisfactory reply concerning the causes of individual differences, the redintegrative mechanism would be in no greater predicament than are the other explanatory concepts" (p. 62). He then proceeds to translate his chosen concept into neurological terminology, though it is not clear what is gained thereby. "A special merit of the redintegrative concept is to be found in the ease with which it dispenses with this elaborate fiction of the efficacious unconscious" (p. 71), an idea which "flagrantly and naïvely ignores the familiar canons of demonstrations and proof" (p. 71).

The main thesis of the whole book is that the essential feature of psychoneurotic redintegration is the "constitutional cortical inferiority (intellectual deficiency)" of the patients, their mental competence being just above that of the feeble-minded (p. 77). "If we have been justified in distinguishing between sagacity and learning, the psychoneurotic's chief difficulty is in the former function, and he may in a given case be pitifully weak in sagacity, yet relatively competent in general alertness. On the whole, however, the trait of sagacity is undoubtedly a component of that more general characteristic which we commonly call intelligence, and mental measurements of psychoneurotic soldiers show very clearly that these cases are inferior to the average citizen. They occupy, in fact, that region of the frequency curve lying just below the average intelligence rating and just above the highest grade of the feeble-minded. They occupy the region of stupidity. It is highly probable that the various 'character defects' so commonly ascribed to the hysteric—dependence, extreme suggestibility, naïveté, forgetfulness, credulity, deceitfulness, impulsiveness, volitional debility, etc.—portray simply the humble intelligence of these patients, rather than the presence of a peculiar 'hysteric make-up' or 'neurotic constitution'" (pp. 78, 79).

The second part of the book comprises a presentation of data intended to demonstrate the truth of this thesis. They are obtained from applying a series of modified Binet-Simon intelligence tests to 1200 cases of war shock cases at Plattsburg Barracks, New York State, where the author worked during the war. As tested in this way, the average mental age of the normal American soldier was known to be fourteen years, but that of the patients suffering from neurasthenia, psychasthenia, and other forms of neurosis, was found to be round about twelve years. It was found further that the average mental age in the cases of conversion hysteria, *i.e.* with physical symptoms, was no less than four years lower than that of patients suffering from psychical symptoms. The author correlates this last finding with the familiar observation in all countries that the former class of case occurred much more characteristically among the ranks and the latter among officers. He ascribes this, however, to the difference in average intelligence subsisting between the two classes of men, and not, as is usually done, to the difference in the psychical situation to which they were exposed (responsibility, motive, prestige, and so on).

A further set of interesting data is furnished by the results of a questionnaire of 116 points, which was made just before and after the time of the armistice. The beneficial effect of this event is shown very clearly, and the

author analyses in detail the respects in which the answers differed before and after it.

The fundamental criticism of the mode of approach in the work here presented, one which evidently has not occurred to the author, relates to the whole of the work now being carried out by means of the various intelligence tests. It is this; that no general conclusions drawn from them can be regarded as other than tentative until some serious study is made of the extraordinarily subtle way in which the individual responses are influenced by affective factors, especially by unconscious ones. The fallacious assumption, for instance, that the emotional disorders from which the author's subjects were suffering had no influence on their responses to the intelligence tests he applied vitiates his conclusions as to the intellectual difference between the neurotic and the healthy, and therefore those as to the nature of neurotic reactions.

ERNEST JONES.

NOTES ON RECENT PERIODICALS.

The International Journal of Psycho-Analysis, Vol. I, Part III, 1920.

Perhaps the most interesting and useful portion of this number is that which is devoted to condensed translations of collective reviews dealing with the progress of Psycho-Analysis during the past six years. Theory of Instinct and Sexuality is dealt with by Ed. Hitschman; Special Pathology and Therapy of the Neuroses, by Karl Abraham; Psycho-Analytic Therapy, by Van Ophuijsen; General Theory of the Neuroses, by S. Ferenczi; Child Psychology and Education, by H. Hug-Hellmuth.

Among the original articles the following may be noted: C. P. Oberndorf writes on "Reaction to Personal Names" and gives illustrations of the unconscious motives that may lead a person to change his name. Stäreke, writing on "The Reversal of the Libido-Sign in Delusions of Persecution," and Van Ophuijsen, "On the Origin of the Feeling of Persecution," both come to the conclusion that delusions of persecution are derived from an anal complex, and that the loved person who reappears as the persecutor has unconsciously been identified with the "Skybalum" which is "the primary (real) persecutor." H. Flournoy gives an account of some "Dreams on the Symbolism of Water and Fire"; and Hanns Sachs relates a short history of a case in which he traces the origin of "The Wish to be a Man." Ernest Jones, in "A Linguistic Factor in English Characterology," seeks to find an explanation of the "insistence on propriety" which all foreign observers consider to be a characteristic trait of the English people. He thinks this trait has been fostered by the peculiar nature of the English language which provides a duplication of its vocabulary owing to its twofold origin from the Saxon and the Norman. More feeling is developed when the mother tongue is used, and it is notorious that the words which are considered most 'indelicate' or 'vulgar' are words of Saxon origin. The possibility of giving expression to forbidden ideas by using a foreign language is well known, and Dr Jones traces "English propriety" to the inhibition of feeling which accompanied the use of Norman-French and Latin words in the transition from Anglo-Saxon to Modern English.

The Journal of Neurology and Psychopathology, Vol. I, No. 4, Feb. 1921.

The greater part of this number consists of Abstracts and Reviews. W. Johnson contributes a useful "Note on Intelligence Tests" and there is an excellent review by C. P. Symonds of some recent studies of animal behaviour and the bearing of these on "The Localisation of Function in the Central Nervous System." In this review an

account is given of the experimental work of Franz and Lashley in America. These investigators, in their work on the training of rats to acquire various habits of a more or less complex nature, were led to enquire into the relation of different cerebral areas to the acquisition or loss of such habits. As a result of their researches they concluded that in learning there is complete vicarious functioning of all parts of the cerebrum, although under normal conditions the various parts have specialised functions. Nevertheless, "this specialisation is only relative and is of such little practical consequence that learning may go on with equal speed in the presence or absence of the specialised areas." The bearings of these results on Clinical Neurology are briefly discussed by Dr Symonds and he suggests that some of the success attendant on re-education in the treatment of the so-called hysterical element in organic nervous disease may be consequent upon a true re-learning;—we may have here a true instance of vicarious functioning.

Alfred Carver contributes some "Notes on the Analysis of a case of Melancholia." His experience leads him to believe that "the underlying fact in melancholia is a failure of re-adaptation to an environment which, owing to a certain deprivation, has been rendered devoid of interest," and that "of all the psychogenetic psychoses melancholia is the most amenable to treatment, though in view of the frequency of relapses one is not justified in speaking of a cure."

The Psychoanalytic Review, Vol. VIII, No. 1, Jan. 1921.

The new volume opens with "A Psychologic Study of Abraham Lincoln" by L. Pierce Clark. The author believes that the true historical interpretation of any great epoch is not possible until we make a complete psychological study of the people of that particular period, especially of its great men and leaders. He attempts to find the origin of the periodic depression from which Lincoln suffered throughout his life. He bases his conclusions on reliable historic documents. From this study "it would seem that no small part of Lincoln's depression was due to certain deep, unconscious fixations or soul-attachment to the mother hindering the normal emotional life which in turn made it impossible in early life for him to assume the usual attitude of religious feeling and thought." Towards the end of his life Lincoln "accepted a religious outlet, as a means for unconsciously solving or sublimating a large part of his regressive relations with life which had heretofore taken the form of intensive and prolonged depressions."

A contribution by Dr Barnes, Professor of History at Clark University, entitled "Some Reflections on the Possible Service of Analytical Psychology to History" deals with the same topic as Dr Clark's paper. The lives of Alexander Hamilton and Thomas Jefferson are examined and the unconscious roots of their profoundly different characters are pointed out. "To a very large degree," Dr Barnes says, "our strong federal government has been but a collective appropriation of the authority-loving and reality-conquering personality of Alexander Hamilton." Hamilton's contact with his father was very slight and he had no experience of male parental domination and the consequent development of an anti-authority complex such as underlay the freedom-loving character of Jefferson. Thomas Jefferson was a slight and pallid youth whose father was "a gruff giant with a tremendous temper," and the experiences of his boyhood were such as were exactly suited to developing an abnormal anti-authority complex. "In a very real sense the Jeffersonian democracy can be regarded as an elaborate disguise and secondary rationalization of his innate revolt against authority and it is as accurate to say that American democracy may be traced back to the recoil of the pallid youth of Shadwell from his gigantic and formidable father as to hold that it derives its origin from the Teutonic folk-moot or opposition to the political and economic program of Hamilton."

Jackson Edmund Towne, in "A Psycho-Analytic Study of Shakespeare's *Coriolanus*" shows that "the story of a bold warrior losing his triumph because so 'bound to's mother' is clearly but a variation of the most essentially tragic of all myths, that of Oedipus."

In a paper on "Religion in the Light of Psycho-Analysis" Cavendish Moxon gives an account of the Freudian view of the part played by religion in the lives of individuals and of the results to society which follow widespread addiction to religious practices. "By turning men's love towards imaginary objects, religion robs society of the vast sum of energy that is used in prayer and ascetic self-mortification." "The man who has the power and opportunity to love and live with all his might needs no religious consolation."

"A Psychoanalytic Study of Manic-Depressive Psychoses" is the title of a paper by Lucille Dooley which is continued in the next number of the *Review*. This study contains much interesting case-material and some probable results of analysis are referred to; but as the author pertinently says, "Because of the irregularities in the manifestations of this disease no one can be sure of the efficacy of any form of treatment until many cases have been studied through a life-time."

The Psychoanalytic Review, Vol. VIII, No. 2, April 1921.

"The Rudiments of Character," by David Forsyth, a paper read before the British Psycho-Analytical Society, is given the first place in the April number. Dr Forsyth endeavours to establish the main facts of infant psychology and the relation of these to character in adult life. He says there is no break in the psychology of the child immediately before and after birth; yet he considers the mind of the new-born child to be a blank as far as intelligence goes and to be lacking in all experience gained through its bodily senses. In birth the child passes from a state of Nirvana-like contentment to one of intense physical distress accompanied by fear. "This most dreadful experience marks the division of an infant's emotions into these two kinds." The intra-uterine state is termed the "vegetative state" and its affective concomitant "vegetive emotion." In this state all wants are supplied without effort and psychic life has not begun. Only with birth do needs arise which require for their satisfaction the activity of the nutritive and secretory functions. These are associated with four highly sensitive areas—the oral zone, the urethral zone, the anal zone and the respiratory zone. Through these zones pleasure is experienced when the tension due to deprivation is relieved by the appropriate stimulus.

The two emotions first to find special expression are love and hate. Love is the feeling bestowed on an object which can satisfy a bodily want. The original objects between which the infant's love is distributed are milk, urine, faeces and breath. "Experience shows that children in whose emotional life the associated zones come to fill too large a share are the most difficult to train and present the most serious anomalies of temperament in adult life."

Lucille Dooley's "Study of Manic-Depressive Psychoses" is concluded in this number. She found the therapeutic results of Psycho-Analysis to be meagre and doubtful. Her failure she ascribes partly to faulty technique, partly to the material worked upon and the handicaps of the surroundings.

Edward W. Lazell writes hopefully of "The Group Treatment of Dementia Praecox." This apparently consists of the delivery of lectures, in which the explanations of the causes and symptoms of dementia praecox are given, to selected groups of patients. As a result of his experience of the method Lazell says: "Taking into consideration the enthusiasm of the writer, and admitting that the results were not likely to have been underestimated by him, there still remains a large factor that cannot be ascribed to the tendency to so-called spontaneous recovery so often seen in praecox."

The number concludes with two interesting notes on literary subjects. Dr J. S. Van Tessaar shows how the Christian tradition of the death of Pan, as a historic occurrence of incontrovertible veracity, may have originated through a misinterpretation of words heard, and Margaret K. Strong gives "A New Reading of Tennyson's *The Lotus Eaters*." "By the device of balanced stanzas, Tennyson presents in the Choric Song the antithesis of a dissociated personality, unreconciled; indulgence versus struggle, sensuality versus rationalism."

The Journal of Abnormal Psychology, Vol. xv, Nos. 2 and 3.

This double number opens with an important article, by Dr Morton Prince, on "Miss Beauchamp: The Theory of the Psychogenesis of Multiple Personality." This study, he tells us, consists of condensed chapters from a volume, planned as a larger study of the problem of human personality, whose publication was deferred owing to the outbreak of the war. The present paper, which deserves fuller consideration than can be given in these Notes, deals with the psychogenesis of Sally, B I and B IV.

A paper on "Four cases of 'Regression' in Soldiers" is contributed by W. McDougall. In these four cases the dominant feature was a regression to early childhood. Their behaviour afforded evidence of a re-animation of infantile modes of functioning which had been superseded and apparently lost or suppressed in the course of growing up from infancy. Dr McDougall compares this outcropping of infantile modes of functioning after severe 'shell-shock' to the new outburst of growth and vital activity which takes place in the older and more primitive parts of a tree when the most recently formed parts are injured or destroyed. He therefore regards "regression" as a biological rather than a psychological process.

"Resolution of a Skin Phobia with Nightmare: A Case of Mental Readjustment in Dreams without Conscious Catharsis" is the title of a paper by Lydiard H. Horton in which he illustrates the use of his "inventorial technique" in the interpretation of dreams. "The dreamer was led to adjust her own mental disharmony through 'dreaming it out'...After two months a 'resolution' dream came which completely eliminated the phobia and the nightmare....The subject gained relief without acquiring that insight into her own complexes which usually is considered necessary."

Alfred Gordon writes on "Illusion of 'The Already Seen' (Paramnesia) and of 'The Never Seen' (Agnosia)," and gives short notes of seven cases in which one of these illusions was present. He does not consider such disturbance of 'recognition' by itself to be pathognomonic of a fundamental psychic alteration in the personality since it may occur in normal states of health. Several factors may be concerned in the production of non-recognition. The most satisfactory interpretation is that which ascribes the illusions to disturbances of the organised motor reactions on which, according to Bergson, the sense of 'familiarity' is based.

T. W. M.

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